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Incipient Hyperthyroidism

C. F. CORRIGAN, M.D., Wichita, Kansas

Read at the Annual Meeting of the Kansas Medical Society at Kansas City, May 4-6, 1926.

During the past four years, we have encountered on many occasions the patients whose symptom complex has been known for centuries among medical men as the so-called neurasthenic or psychoneurotic.

Early in the course of our work we were impressed at times with the similarity in many respects in the symptoms of this condition with the disease known as hyperthyroidism. At times it seems a hopeless task to separate these conditions, since many of the symptoms of the psychoneurotic state, early heart disease, endocrine disorders, systemic diseases were very similar and in deed hard to analyze.

We continued to observe these patients feeling that there was an underlying something in many of the poor individuals who were really sick, that was and could not be explained by the so-called diagnosis of neurasthenia. We felt that we were dodging the responsibility of a more accurate diagnosis.

As Lambert says, the more one studies hyperthyroidism the more one realizes that it is an algebraic sum of morbid processes, some arising in the thyroid, others in the para-thyroid, pancreas, adrenals, ovary, and pituitary are not unimportant in the interrelationship of the many glands of the body.

When nervous irritability and change of disposition occurs, when a formerly reasonable patient presents a veritable chorea of intellectual functions, we must not attribute it to neurasthenia, but realize that they are suffering from an internal poisoning which we have been accustomed to consider as a part of hyperthyroidism, and which we would readily recognize if the full picture was present. But it is in those cases in which symptoms we formerly considered as cardinal seem to be absent, or present only in a slight degree, that we usually fail to recognize, that the chief disturbance is in the thyroid gland.

Speaking of the intermittent type of hyperthyroidism, Curschman cites a number of cases which developed the complete picture of hyperthyroidism at intervals. One case was in a tabetic who developed typical symptoms of hyperthyroidism during his gastric crises, the symptoms of hyperthyroidism disappeared as the gastric crises subsided. He also reports two similar cases in asthmatics.

Horsley reports a case in which hyperthyroid symptoms of extreme nervousness, tachycardia, tremor, sweating, and exophthalmos reoccurred regularly during menstrual periods of a young girl for three years. Thyroidectomy cured this patient.

Recently Levine and Sturgis have reported five cases of hyperthyroidism masked as heart disease. A few of these patients had been observed previously by able clinicians and were overlooked for a long period. The diagnosis was brought about by repeated basal metabolism tests. The diagnosis was confirmed by the response of patient to treatment and in two cases by positive histological report.

The study of hyperthyroidism impresses one with its variations and gradations. Its objective and subjective symptoms might easily be mistaken for those of other diseases, such as neurasthenia, psychoneurotic states, early heart disease, endocrine disorders, and systemic diseases. These variations and gradations of hyperthyroidism have been observed by medical men for a long time, but a scientific answer was wanting until the discovery of thyroxin by Kendall, and its subsequent development by Plummer and Boothby of the Mayo Clinic. It is to these men that we owe the credit of clarifying this issue.

Hyperthyroidism occurs unquestionably in three states according to Plummer:

1. Following the administration of thyroid gland or its active agent thyroxin.
2. In hyperfunctioning adenoma.
3. In exophthalmic goiter.

It is well known that hyperthyroidism is sometimes present in psychoneurotic states, essential hypertension and pituitary disease with basal metabolism above normal. It is possible for the thyroxin content to rise when the basal meabolism is

held above normal by other dynamic agents and in the physiologic states more or less attended or induced by the inability of the organism to come to rest. That irrespective of the presence or absence of the hyperthyroidism the rate of exhaustion is high in essential hypertension in psychoneurotic states and possibly in many physiologic conditions, throwing stress on the organism, is supported by considerable evidence. Furthermore, sutained stimulation of the thyroid may start the development of adenomatous tissue, store colloid in excess of the normal and may imitate hyperthyroidism.

Boothby contends that stress and strain induced by psychoneurotic states initiates hyperthyroidism. Cannon in his classical studies on the liberation of thyroxin concludes that in this type of patient there may be continuously present in the blood an increased thyroid secretion below, however, the amount required to excite recognizable clinical symptoms. On excitement or moderate exertion this secretion is increased to a point at which definite symptoms might be observed. I believe we must accept this explanation as it certainly offers a ready explanation of the peculiar symptomatology in this group of cases.

ETIOLOGY

The ten cases here considered are we believe definite cases of incipient hyperthyroidism. That is the symptoms were present and consistent over a period of watchful waiting on an average from two to six months and in some much longer. They all have had a basal metabolic rate of plus 25 or somewhat higher after repeated tests during the time observed.

We have seen many other cases of similar character but whose basal metabolic rate was of the borderline type, that is plus 15 or so, which we feel are incipient cases and will no doubt prove themselves as such if we are able to follow these cases for a reasonable length of time. For various reasons, however, we will not consider these cases, hoping to have the opportunity to follow them longer.

The etiology, of course, is not definitely known. But it is interesting to note that three of the ten patients reported were perfectly well without any demonstrable evidence of hyperthyroidism previous to a flu attack during the past two months. This is definitely in accord with our previous conception of the etiology or at least as an exciting factor that of acute and chronic infection.

It might not be amiss to mention a very decisive point in favor of infection in a report of three nurses then in training. About three years ago during a severe epidemic of diphtheria a number of nurses at a local hospital developed diphtheria. They were given the usual specific treatment without any evidence of "allergy." In approximately three or four weeks these girls developed what was and could not be mistaken, typical hyperthyroidism, that is, all the cardinal symptoms and physical findings were present. Basal metabolic rate was plus 40 and plus 50 respectively. The third case was somewhat milder but indeed definite. Surely the development of hyperthyroidism in these cases is not merely a coincidence.

Hereditary influence seems to play a large part in most cases, as history of goiter was obtained in other members of the family or relatives in five of the ten cases. This is consistent with the history of most patients with the classical picture of hyperthyroidism.

Tonsillitis was noted in three cases; scarlet fever in one case but not definitely associated with the advent of infection, so as to correlate it with beginning hyperthyroidism. Hypertrophied and infected tonsils were noted in four cases in which pus was easily expressed from the tonsils. This it seems likely is somewhat significant as removal of tonsils with the usual medical treatment was sufficient to definitely arrest the condition.

Definite apical disease of the teeth was present in but one case, but we are unable to say whether it had any definite bearing on the condition or not. No other definite foci of infection were discovered after careful history taking and physical examination

The physical examinations of these patients were negative for other demonstrable lesions, such as heart disease, endocrine disorders, etc. The urine, blood picture, and Wassermann were essentially negative. The metabolic rate will be discussed later.

SYMPTOMATOLOGY

Since the symptoms are common to many other conditions it would certainly be inconsistent to lay too much stress upon any particular symptom or any group of symptoms in their incipiency. We are not quite in accord with Lahey in his conception of symptoms as he calls them "peculiar" to heart disease; "peculiar" to hyperthyroidism; "peculiar" to emotional states. There is no doubt much is to be learned from the word "peculiar." I do not believe we can "tag"

the symptoms with the word "peculiar" in any of these conditions.

Without a comparative analysis it can be stated that the hyperthyroid patients presented a symptomatology decidedly more definite than the majority of others studied.

SUBJECTIVE SYMPTOMS

The hyperthyroid patient is more definite and decisive in his complaint. He realizes that he is sick and as a rule is willing to co-operate in every way possible for an early return to health. The psychoneurotic on the other hand presents a vague picture which is as a rule inconsistent and irrelevant to any diseased condition. He is an unwilling patient and assumes the attitude of indifference. He is prone to lack confidence. Apprehension was a note-worthy feature in hyperthyroidism, which manifests itself by a slight stare of the eyes so common in these patients.

OBJECTIVE SYMPTOMS

1. Most helpful—a sustained increase in the pulse rate in the recumbent position for one half hour.
2. Slight staring or somewhat anxious look of the eyes. Definite visual eye signs were not noted.
3. Slight diffuse enlargement of the thyroid.
4. Tremor was present in all cases but it is so common in other conditions that we do not feel as though it is of great value.
5. Definite exophthalmos was not noted.
6. Increased warmth of the skin.
7. Loss of weight—five to ten pounds in a period of two to six months with normal appetite.
8. Paroxysmal auricular fibrillation was present in four of the ten cases, although not pathognomonic of hyperthyroidism is we believe at least a suggestive finding and helpful at times.

DIAGNOSIS

We feel that the diagnosis of this condition or any other condition is dependent not only upon a few findings or symptoms but on a careful history and physical examination correlated with accurate laboratory work.

All of the cardinal symptoms were not present in these cases during the first, nor at a number of subsequent examinations. But it is interesting to note that in two of these cases in four and six months respectively, they developed the true clinical picture of hyperthyroidism.

The so-called "Goetsch" test for adrenalin hypersensitiveness which in the past has been regarded as a diagnostic aid was not used because it has been conclusively proven both in the Mayo Clinic and in the Lahey Clinic of Boston to be valueless, due to the fact that it is positive in many other conditions.

The sugar tolerance test or curve although unquestionably of value in some of these cases, offers many pitfalls for erroneous diagnosis. Especially is this true in those cases of diabetic predisposition and in incipient diabetes. This has been conclusively proven by Sherrill and Johns working with Allen in their work on sugar tolerance tests on members of diabetic families and their relatives.

DIAGNOSTIC VALUE OF BASAL METABOLIC RATE

If we accept, says Boothby, the definition of hyperthyroidism as a clinical syndrome resulting from the presence in the body of an excess of thyroxin, which increases the rate of heat formation and that the basal metabolic rate serves as a fundamental classification of disease, it is then obvious that a sharp distinction can be drawn between mild cases of hyperthyroidism and those conditions known as effort syndrome, disordered heart action, cardiac neurosis, or neurasthenia. The basal metabolic rate is of peculiar diagnostic value in these cases. The basal metabolic rate was consistently at plus 25 or more in these cases after repeated checked tests. Therefore, we consider the basal metabolic rate as pathognomonic or at least overwhelmingly confirmatory.

TREATMENT

Two of these cases observed as definitely incipient in every respect during the first months of observation finally developed all the classical symptoms of hyperthyroidism —one of the exophthalmic type and the other of the adenomatous type. These cases were operated and specimens sent to the pathological laboratory and reported back by the pathologist with a definite confirmatory histological report.

The other eight cases were treated with rest in bed, bromides, and the x-ray with definite arrestment in five. Lugol's solution was withheld because we were unable to type these cases as to the definite pathology of the thyroid, that is, as to whether they were of the adenomatous or exophthalmic type. Three of these cases are still under observation and we feel, although the results are encouraging, sufficient time has not elapsed for final decision.

SUMMARY

When nervous irritability and change of disposition occur when formerly a reasonable patient presents a veritable chorea of intellectual functions, we must not attribute it to neurasthenia but realize that these patients are suffering from an internal poisoning which we have been accustomed to consider as a part of hyperthyroidism and which we would readily recognize if the full picture were present.

INFECTION

That the occurrence of influenza and diphtheria in six of these cases immediately prior to the development of hyperthyroidism surely cannot be considered as a mere coincidence. We believe that infection is a causative factor in many of these cases, directly, and in others as an exciting cause.

DIAGNOSTIC AIDS

1. Female preponderance. There were nine female patients and one male patient.

2. A complete history and physical examination is most helpful.

3. Sustained increase in the pulse rate, averaging 90, in the recumbent position after one half hour.

4. Slight loss of weight—five to ten pounds in from two to six months with normal appetite.

5. Persistent metabolic rate of plus 25 or more after repeated accurate tests, in the absence of other demonstrable pathologic conditions.

6. That there are varying gradations of this disease in many individuals under stress or strain or following infection. That the underlying something in many cases is not neurasthenia, but incipient hyperthyroidism which was proven in every case clinically, and in two cases which finally developed the full picture and was proven definitely by histological report.

7. That the basal metabolic rate is of a peculiar diagnostic value in these cases.

8. That we feel that it is a difficult task at times to separate these conditions, but that a careful survey and watchful waiting may bring health to the patient.

We are fully aware that there exists a condition, neurasthenia, but we feel that many cases so labeled are not neurasthenia but incipient hyperthyroidism. And that all cases of nervousness should be considered incipient hyperthyroidism until proven otherwise.

Fake Doctors

S. N. CHAFFEE, M.D., Talmage, Kansas

Read at the Annual Meeting of the Kansas Medical Society at Kansas City, May 4-6, 1926.

In many European countries where the status of the physician's profession is better established than in ours, the question of Fake Doctors might not be interesting; but in America with our boasted freedom of thought, expression and action, our desire for something new, and the extremely tolerant attitude of our state legislatures, we have become a fertile soil for all manner of societies, cults, fakirs and fads.

It was Justice Marshall who said, "Let us be free and tolerant but not so much so that we encourage the unpatriotic or give license to the charlatan and the knave."

I wish to mention a few of the fake doctors and suggest the attitude which we should take toward them.

1st. The divine healers we have always had, and to denounce them may seem unchristian; but, much as I respect Christianity, I think the day of miracles is past, except such as are wrought by scientific effort; and I do not think that God is delegating to such as Schlatter, Mrs. McPherson, and Voliva the achievements in this line which intelligent, trained, persistent and self sacrificing students of nature are unable to accomplish.

Then there are the disciples of Mary Baker Eddy with their ignorant, shallow philosophy disgracing the name of Christ and of science by calling themselves Christian scientists; claiming sickness is only a mental error and charging $5, $10, or $100 each for absent treatments for that which they claim does not exist. **What Rot.** We often hear of wondrous cures away off by these divine healers or Christian scientists. They may have a beneficial influence in some neurotic cases, but such good is many times counterbalanced by the harm they do in deterring those who are seriously afflicted from obtaining help from a competent physician before it is too late.

Many physicians accuse the osteopath of belonging to a profession of fake doctors. I do not consider them entirely so, for we must concede that , aside from requiring two years less preparatory work for entrance, the osteopathic colleges require about the same time for graduation as do our own.

The trouble with the osteopath is that his basic theory is unsound. His plan of treatment applys only to a few ailments and in order to keep up a thriving business, he

undertakes much work which he is entirely unfitted to perform and much which is entirely uncalled for. A young lady took typhoid. Her father employed an osteopath and she survived his manipulations for 23 days, when the bowel suddenly ruptured and in a few hours she was dead.

I had a case of a young married woman who had appendicitis with abscess who had refused an operation. The abscess finally ruptured into the bowel and patient recovered through expectant treatment but was quite emaciated. Later she visited an osteopath with her sister who was taking treatment from him. She was examined by said osteopath and convinced that her appendicitis had been caused by a dislocated hip and that one leg was 1½ inches too short. After pulling her leg, literally, and her husband's figuratively, many, many times at $2.00 per treatment she was restored never to be thus afflicted again. You could all cite similar instances. I do not accuse all osteopaths as being fakirs, but they are doing too much work to be entitled to respect and confidence as physicians.

Then we have the fake diploma mills, some of which were exposed in the Kansas City, St. Louis, and Connecticut scandals. These have scattered a few ignorant imposters throughout the land but they are not numerous.

Next come the goat gland experts; the rejuvinators; who, by feeding the gland tablets, injecting the extract or transplant the glands themselves claim to have outdone Ponce De Leon and discovered the fountain of youth at last. The chief fakir of this class hails from near my town. At home he is a joke; at Chicago quite famous; at Los Angeles still more renowned, and at Pekin, China, a world wonder.

I shall not stop to discuss the patent medicine quack nor Dr. Abrams with his electronic graft except to indicate where they belong, but shall pass on to the king of all quacks, the Beau Brummel of all fakirs, namely, the chiropractor.

Bigoted, ignorant, conceited, arrogant, self confident and bold he has invaded every part of our country and is rapidly multiplying. While the osteopathic fraternity numbers about 7000 after 50 years the chiropractors number 15,000 in 30 years and the Palmer school at Davenport alone is hatching out about 2000 new doctors and philosophers each year. The chiropractor not only discards but derides and sneers at experience and real science as applied to the cause, diagnosis and treatment of disease, and especially condemns the use of antitoxines, vaccines and serums by which we have accomplished so much in the prevention and cure of typhoid, small pox, diphtheria and many other diseases. His cause of all physical and of most mental ailments is the subluxation of some vertebra and his cure the replacement of the same. Upon this silly childish theory is based the whole art and philosophy of chiropractics. Their colleges pretend to require a common school education for entrance, but they really have no requirements, and from farmers, draymen, barbers or cream testers, they in 18 months develop into doctors, and, in a few hours more into philosophers of chiropractic. One thing they do not neglect to teach is camouflage. Like bot flies and bumble bees they hatch out quickly, make a loud noise and usually change pastures frequently.

WHAT SHALL WE DO ABOUT THE FAKE DOCTORS?

1st. Let us be careful that we never play the fake game ourselves. He who hastily declares that his patient with pains of acute constipation or indigestion has appendicitis or gall stones and insists on a speedy operation just to get a fee is playing the fakir game himself and if patient resents he will probably take a dose of olei rinci, then go to the chiro. Nature cures him and the chiro. gets the credit. Next time he gives some fakir first chance and perhaps sends him a friend or two in the meantime. Likewise, the doctor who calls the benign sore or tumor a cancer or sarcoma may later find his patient recovering in Savannah and adding to the fame of that already renowned institution. We cannot always be right, but we should be superbly honest and extremely careful and painstaking in our diagnoses; and when we don't know let us be ready to counsel with some one who might know.

2nd. We should have a wider and more practical knowledge of treatment. I hold that our medical schools are spending too much time on fundamentals and too little on the practical side of the physician's training. The public thinks we know only how to prescribe medicine and use the knife. Of course this is not true, but we should be better learned in all forms of non-medicinal therapeutics including even what is good in osteopathy, chiropractic and suggestion.

3rd. We should strive to secure more fair and sensible laws governing the practice of healing. Any person who practices the art of healing as a profession should certainly have studied thoroughly the human system and the laws and forces which

govern it both in health and disease. They should also know the causes, nature, course and symptoms of diseases. They should all then be required to pass same examination in anatomy, physiology, histology, pathology, surgery, hygiene, chemistry, bacteriology, and symptomatology before the same board of competent physicians. The chiros presume to pass the same state examination in anatomy, physiology, hygiene and symptomatology that we do, but we know that they could not be educated in these subjects and, besides, their examining board, consisting of three chiropractors, a school teacher and a preacher is not competent to pass on these subjects.

4th. We should get in closer confidence with the public and show them what it takes to prepare for the work of a physician and also what we have done and what we are doing for the welfare of humanity. We have been, not too ethical nor too dignified, but too modest and too reticent while the **quack** has blowed his horn; has used the press, the platform, and the radio to promote his cult. Let us in a dignified and ethical way show the public what we have put in our profession and what we have done as compared with the fakir. What has the fake doctor done for humanity? He has deceived them and poisoned the mind of the ignorant and credulous against our worthy profession; he has taken the coin from the purse and given nothing in return; he has lured his followers to an untimely grave or to the loss of loved ones; he has disgraced the name of doctor and physician.

What have we done? We have by the discovery and perfection of anesthetics removed the pain and horrors of surgery; by the use of antiseptics we have hastened the healing of wounds and saved the lives of thousands; by our war on the mosquito and the use of vaccines, serums and antitoxines we have about eradicated the deadly yellow fever, the dreaded hook worm, the small pox, typhoid, diphtheria and many other diseases. We have brought diabetes under control, made great strides in sanitation, greatly decreased infant mortality and materially increased the longevity of the human race; again and again have we faced the storm at the midnight hour to snatch a loved one from the throes of pain or death. These are only a few of our beneficent accomplishments. Then let us speak out and call the attention of mankind to the achievements of our noble profession to the end that the name of physician may occupy the position of dignity, respect and esteem which it merits.

Blood Pressure

J. T. Scott, M.D., St. John, Kansas

Read Before the Stafford County Medical Society.

There are many instruments available as aids in dagnosis, all of which are really indispensible. They range from a simple test tube to the most complicated and highly sensitive instrument, the electro-cardiograph, which can be successfully used only by one specially trained in its manipulation. Not one of them can be dispensed with but to the general practitioner there is no diagnostic aid that can quite equal the sphygmomanometer when properly used and interpreted. The primary purpose in its construction was the production of a mechanism whereby blood pressure could be recorded, hence its common name, blood pressure instrument. Correct technique is essential to reliable readings but the technique is simple and can be acquired by any physician, almost as simple as taking the body temperature. A little practice and perseverance is all that is required. Much more important, however, than the taking of a reliable reading is its correct interpretation. Most of us in the past and perhaps also at the present have used and are using our blood pressure instruments for the sole purpose of measuring the systolic pressure. Life Insurance Companies required no more until recently. They are now requiring diastolic as well as systolic pressure. These records are helpful and essential but they are only an introduction to the field of information made available to the physician capable of its interpretation. To properly interpret blood pressure readings requires knowledge, thought and time but it pays dividends in early information regarding impending pathology that is in no other way obtainable.

It is the purpose of the writer to stress the importance of proficiency in interpretation. The first thing necessary to such proficiency is knowledge of blood pressure in health. Numberless tables are available, no two being the same. This is not strange for blood pressure is variable. Two individuals, both in usual health, may carry pressures differing as much as ten to twenty millimeters. The best that can be done then is the adoption of a table of average pressures at specified ages. My choice is the one appended:

Age	Sys.	Dias.
10-17	80-110	50-70
20-30	120-125	70-85
30-40	120-130	75-90

40-50	125-135	80-90
50-60	130-140	80-90
60-70	135-145	85-100
70-80	140-150	90-105

This is the so-called male table and should be reduced 10 mm for females. It will be observed that the systolic pressure ranges between 80 and 150 mm. and the diastolic between 50 and 105 mm. It may be well to here state that a persistent systolic pressure above 150 is pathological and the same may be said of a persistent diastolic pressure below 80, according to all authorities available. The general public should be informed of the value and importance of periodical blood pressure readings for the reason that early information of impending disease is thus obtainable and in no other way. That all our citizens would profit immensely by having periodic physical examinations is amply evident but in as much as only a small number do so it might be possible to increase that number by calling attention to the importance of a simple blood pressure reading. This would not take the place of a thorough physical examination but it would, in many cases, display the danger signal of an insidious disease not yet sufficiently developed to present recognizable symptoms. Such information should mean the immediate employment of proper remedies and measures to restore function and tissue for such a result can be anticipated only in cases diagnosed in their incipiency. Entirely too many patients appeal to the physician too late to be cured, they can at most, only be repaired. There is in this statement an intimation as to the importance of the physician giving careful and painstaking attention to his cases of so-called minor ailments. They should never be dismissed by a shrug of the shoulder and an impatient hand wave. Give them careful, conscientious, scientific consideration and in a surprising number of them you will discover the golden opportunity of nipping disease in the bud. After all the great objective of medicine is prevention of disease following which cures will not be required. Ability to scientifically interpret blood pressure readings requires extensive knowledge which can not be compressed within a paper of reasonable length hence I shall attempt only to epitomize the more important and practical facts.

Grover says hypertension means a sustained pressure above normal; hypotension a constant pressure below normal; hyperpiesia means hypertension without cardiovascular changes. Hypertension does not always depend upon the work of the heart, since it has been noted that in cases of weakness of the heart muscle the pressure may be high. The systolic pressure alone can not be depended upon unless supported by the diastolic and pulse pressures together with the pulse rate. It is also important to know the total amount of energy spent by the circulatory system in a minute or an hour. This information is of value in cases where we suspect giving-way of the vessels, such as apoplexy and other hemorrhages. Barach has applied the neonym "Energy Index" to the method of obtaining the above information. He says—from the pulse rate we know how may systoles and how many diastoles to each minute there are in the arterial tree. For example: if the systolic pressure is 120 mm, the diastolic pressure 70 mm and the pulse rate 72 per minute the energy exerted in one minute would be: in systole 120 x 72 or 8640 mm: in diastole 70 x 72 or 5040 mm: in both 190 x 72 or 13,650 mm.

You will observe that the energy index is obtained by multiplying the sum of the systolic and diastolic pressures by the pulse rate. Recognized authorities state that the maximum energy index consistent with safety to the vascular system is 21,000 mm of mercury. The normal index range is from 13,000 to 20,000. When less than 13,000 it suggests general weakness; when above 20,000 an excessive circulatory load which will sooner or later, if not corrected, lead to disastrous consequences. A careful consideration of blood pressure, pulse rate and energy index will yield an abundance of information of inestimable value in arriving at a diagnosis of many pathological conditions. In taking readings on the same patient over a period of time it is important that they be taken as near the same hour of the day, the same time from a meal and under conditions as nearly alike as possible. I think it fair to state that a very large proportion of physicians are satisfied with systolic readings; a greatly reduced number take both the systolic and diastolic pressures and but few compare these readings with the pulse rate. While the systolic pressure taken alone may give some idea of vascular tension it of little value in diagnosis. The diastolic pressure is a better guide to diagnosis than the systolic. Systolic pressure represents the force of the heart required to drive the blood through the arteries. The diastolic pressure represents the tension which the arterial walls exert upon the blood stream; it is the pressure that the left ventricle must overcome

before the aortic valve opens. The systolic and pulse pressures show heart values and the diastolic pressure shows resistance to be overcome. The systolic pressure is easily influenced by psychic phenomena and its elevation is more or less a physiological process; the elevation of the diastolic pressure depends largely upon pathological changes. Pulse pressure, the difference between the systolic and diastolic pressures, when taken alone represents the force applied to the arteries by the heart during systole or the heart's energy which produces a distention of the arteries known as the pulse. The pulse pressure represents the heart load or over load and is of great importance in prognosis. The pulse pressure should be 50 per cent of the diastolic and an increase of 40 mm in load would indicate that danger is lurking near. The importance of the pulse rate in connection with the systolic and diastolic pressures may be appreciated by reference to the following examples:

A normal systolic, high diastolic and high pulse rate suggest myocardial weakness. A normal systolic and diastolic with a low pulse rate suggest the opposite, cardiac hypertrophy. A low systolic, normal diastolic and normal pulse rate suggest neurasthenia, while the same systolic and diastolic pressures with a high pulse rate suggest tuberculosis or other infection. A high systolic, high diastolic and high pulse rate suggest failing heart, while the same pressures with a low pulse rate suggest arterial changes and a competent heart. A high systolic, low diastolic with a normal pulse rate suggest a weak myocardium, while the same pressure with a high pulse rate points to thyroid intoxication. Hypotension always means lowered vitality and occurs in acute infections, chronic wasting diseases, most nervous diseases, some cardio-vascular conditions, blood dyscrasias, intoxications, etc. Another factor in blood pressure interpretation which is often underestimated is the position of the patient. All readings, especially the first, should be taken in the horizontal, sitting and standing positions. The systolic and diastolic readings should normally be highest standing, lower sitting, lowest supine. If these readings are reversed they indicate vasomotor insufficiency, myocardial weakness or an accumulation of blood in the splanchnic area. With a normal heart the pulse pressure will fall upon changing from the supine to erect position. If there be a rise in pulse pressure on changing from the supine to standing position it points to cardiac hypertrophy. The diastolic pressure in changing position from horizontal to erect rises in the normal. If it lowers look for valvular diseases of the heart. Should there be a fall in all pressures in changing from supine to standing position it points to cardiac dilatation, which an examination of the heart will confirm. A high diastolic pressure always means great vascular tension and when constant points to cardio-vascular changes. A normal systolic, high diastolic with high pulse rate suggests a poor myocardium. The deficient heart muscles require an increased rate of contraction to overcome the peripheral resistance or diastolic pressure. This condition leads to cardiac dilatation.

There are very many variations in pressures and pulse rate each of which furnishes diagnostic indications and merits careful consideration but the foregoing must now suffice.

I can not conclude without giving some consideration to the condition Dr. Clifford Allbut has named hyperpiesia. This is described by him as cases of hypertension without marked cardiovascular changes. Grover says—hyperpiesia is a premonitory indication of pathological changes yet to come and is not, as has often times been supposed, the result of arterial changes. In other words, hypertension is now considered to be the primary cause of structural changes in the arteries. Persistent hypertension naturally causes cardiac hypertrophy which develops to overcome the resistance. This is a physiological and not a pathological process. Whenever hyperpiesia exists it may be known that in the course of time hypertrophy will follow unless the cause is removed. The argument that hypertension is compensatory and should not be interfered with will not hold good as the condition antedates by months and even years the cardiac hypertrophy and kidney lesions. I am aware that the matter of treatment does not necessarily come within the scope of this paper, however, I am asking your indulgence to the extent of presenting an abridged consideration of a comparatively new method of treatment which surpasses all other methods in certain cardio vascular conditions, namely, the high frequency current. An authority of extensive experience says that hyperpiesia or that stage of hypertension which exists for years prior to pathological changes in the arteries, in a large majority of cases, can be cured by a combination of high frequency currents and common sense hygienic measures. After a hypertrophic condition of the smaller blood vessels and a mild de-

gree of cardiac hypertrophy have developed as evidenced by a systolic pressure of 170 or less, a normal or slightly elevated diastolic accompanied with a normal pulse rate, the effects of treatment, while not so prompt, are satisfactory and a favorable outcome may be expected. Even after the urinary and blood findings justify a diagnosis of nephritis, the systolic pressure very high and diastolic under 120, with a slightly decreased or increased pulse rate, while the cardio vascular condition cannot be restored to normal, much may be done toward prevention of further changes in the arterial tree. The systolic pressure alone, regardless of its height, is no guide at all in the consideration of prognosis, but when the diastolic persists at 120 or above for a period of two years a fatal tremination within 1 or 2 more years may be expected. Yet under these conditions much can be done to modify the symptoms and make the patient comfortable. High frequency currents in the form of autocondensation diathermy and the unipolar application, each under indications of its own, are employed in the management of cardio vascular conditions. Hyperpiesia or hypertension prior to cardio vascular changes is easily controlled by autocondensation.

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Injection Treatment For Hemorrhoids

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Proctologists have long known and made use of the knowledge that selected cases of internal hemorrhoids may be cured or relieved by the injection of various chemicals. Advertising quacks have used their indefinite "serum treatments" on a gullible public until the term is in more or less general disrepute. I, therefore, would hesitate to express my views if three years experience had not convinced me that it has a definite though limited field of usefulness.

A popular fallacy is that "injections" may cause cancer. There is no evidence indicating that such treatments predispose to malignancy any more than an operative scar. It seems logical to suppose that the lessened irritation and infection would tend quite the opposite.

Another fallacy is that sloughing occurs. Sloughing does not occur unless infection follows lack of surgical cleanliness, too much fluid is injected, or the injection is made just beneath the mucous membrane rather than into the venous tumor. Accidents may occur here as in other procedures where asepsis and good judgment are prerequisites of success.

Surgery is still the only satisfactory treatment for many ano-rectal conditions. It is always easiest for the doctor. It is quickest for the patient provided they can take a week away from their business. There are times, however, when it is important to the patient to keep going or the hospital bill would be a serious financial drain. Fairness to the patient demands that they be given an ambulatory and economical treatment where indicated.

TECHNIC

Five per cent quinine-urea hydrochloride has been used in all cases excepting two patients who were susceptible to quinine, a fact which should always be ascertained before it is used. These were given 10% phenol in glycerine and water with satisfactory results.

Five to fifteen minims of the solution is injected into each hemorrhoid, two or three at a time, at five to seven day intervals. The only instruments necessary are a Martin, Montague or a Hirshman anoscope, a tubercular syringe and a 26-guage three-eights inch dental needle on an extension. Very slowly the fluid is injected as nearly into the center of the venous mass as possible. If the mucosa turns gray as the injection is started the solution is too superficial and a slough may occur. Further treatment at this point should be postponed until a later date.

INDICATIONS

Quinine urea is essentially an ambulatory form of treatment and for anything beyond this limitation surgery is indicated. To be ambulatory the treatment must be practically painless. Such injections into the skin with its somatic innervation are exceedingly painful, therefore treatment with an irritating solution is suitable only for conditions in which the outstanding pathology is above the ano-rectal line.

Internal hemorrhoids best described as the "mulberry" type, characterized by bleeding, aching, constipation and a sense of weight about the rectum are ideal for this treatment. Bleeding is stopped by the first injection and as the treatment progresses the tumors shrink and the membrane gradually assumes its normal color. In such uncomplicated cases the results are fully as satisfactory as operation. This stage of the disease does not entirely incapacitate the patient so that the majority are neglected until cryptitis, papillitis, fissure or other

infection develops which requires surgical drainage.

Another type of hemorrhoid suitable for injection is the so-called prolapsing hemorrhoid. In order for a hemorrhoid to be protruded thru the anal canal there must be more or less prolapse of the mucosa. The mucosa prolapses when its connective tissue supports become too relaxed to hold it in place. If there is a congenital weakness of submucosal connective tissue, there is a similar predisposition in the veins so that with lessened support and mechanical obstruction, hemorrhoids may develop secondary too, rather than being the cause of the prolapse. The inflammatory reaction created by properly placed injections in cases which have not progressed too far produces a fibrosis which holds the mucosa in place quite as well as operative scars. After relieving the congestion above the ano-rectal line there is usually a decided improvement in the interno-external and external hemorrhoids.

Diabetes, anemia and cardio-renal cases in which frequent catharsis is used may be complicated by annoying bleeding. As operation is usually contra-indicated, the injection offers a method by which the hemorrhage may be quickly and safely controlled.

Surgeons who make routine post-operative anoscopic examinations know that a small internal hemorrhoid is very easily overlooked at operation. One or two injections into this may "prevent the piles from coming back" and thus deliver us from an embarrassing explanation later on.

And then we have those who were operated upon several years ago and now have a recurrence. Removing plugs, dilating and excruciating pain with bowel movements, are still vivid in their memory. These patients are apt to be skeptical when we tell them that their post-operative course can now be made practically painless. Injection treatment is entirely satisfactory for many such cases.

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KANSAS STATE MEDICAL LABORATORY ASSOCIATION

The Value of Stool Examination

ALBERT S. WELCH, M.D., Kansas City, Mo.

The simplest method for gaining knowledge of happenings and situations in the gastrointestinal tract is by examination of the material that has passed from it. Such tests are no hardship to the patient, are not expensive and require very little laboratory apparatus. Yet as a general rule many more x-rays are called for in gastrointestinal conditions than there are requests for stool examinations. Three oustanding functions of the gastrointestinal tract are secretion, absorption and motility. The x-ray tests only one of these, and that under artificial conditions.

Examination of the stool yields information on the motility, absorption and secretion of the gastrointestinal tract, from the mouth to the anus[1].

Indirectly through such data, knowledge of general bodily conditions is secured. It seems that there is more to be gained by stool analysis than by any one of such examinations as of the stomach or duodenal content, esophagosocopy, sigmoidoscopy, digital rectal examination, or x-ray.

NORMAL INTESTINAL CONTENTS[2]

The fresh contents of the alimentary tract at different levels was examined at autopsy. Infants, adults and aged bodies were included. The esophagus was found empty and relatively free from bacteria. Desquamated epithelial cells were probably connected with agonal and postmortem changes. The stomach contents was generally comparable to that secured by aspiration of the living subject.

In the duodenum, there was usually a little brown material, thick with mucus and relatively free from bacteria. The food elements that were so obvious in the stomach contents were missing except for hulls, seeds and stones. Many columnar epithelial cells, single and in clumps, were present. The bulk of the contents appeared as fine granular material under the microscope after staining.

At the proximal part of the jejunum, only a few bacteria were found, mostly large Gram-positive nonmotile organism; but at the lower part of the ileum, there were numerous bacteria, some quite motile, both Gram-negative and Gram-positive. The ileum generally contained more material than the intestine proximal to it, darker brown, but with similar mushy mucoid consistency. Only a few epithelial cells were found.

In the caecum was a distinctly brown, watery or mushy mass, less mucoid in appearance, teeming with Gram-negative micro-organisms of many sizes and shapes. A few Gram-positive bacteria were present, and not infrequently a fat, acid-fast organism which could readilly be mistaken for the tubercle bacillus. Most of the mass was bacteria.

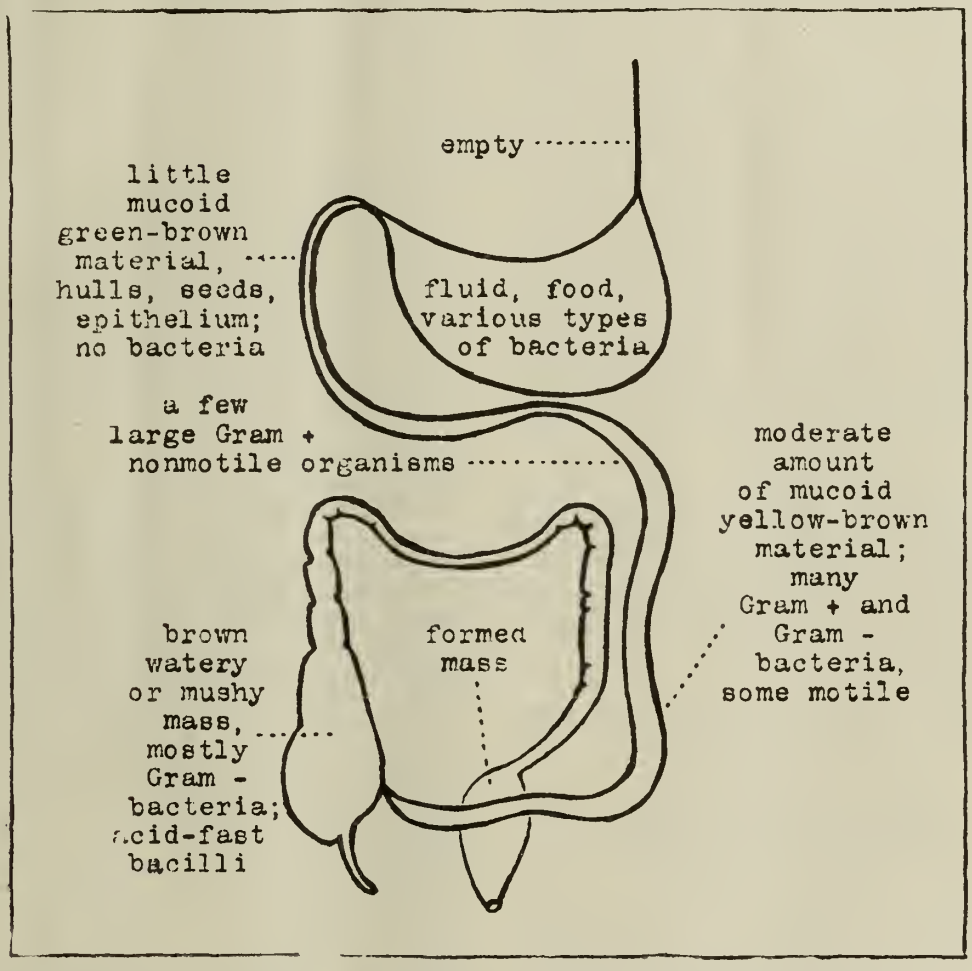
The appendiceal contents was similar to that of the caecum. Occasionally it was firm and brown.

From the caecum to the rectum, the contens were found progressively more dry and formed.

WHAT THE STOOLS REVEAL

The gross character of the stool is very significant. Material that passes rapidly through the intestines is mushy, greenish because the bile pigments have not been altered after leaving the duodenum, contains spinach is eaten the stool is green; and stools containing bismuth are gray. Clay-colored stools are pathognomonic of occluded bile ducts. Black stools occur with bleeding from high in the alimentary tract, and stools that are red or streaked with red indicate bleeding near the outlet.

The caliber is normally approx. 1 in. dia., but with spasticity of the lower bowel the stool becomes narrow and sometimes lumpy.



columnar epithelial cells and is relatively free from bacteria. When Gram-positive organisms outnumber Gram-negative, the presumption is that the intestinal content has had only a short stay in the large bowel. Grossly homogeneous mucoid material signifies rapid passage through a large intestine which itself may not be severely altered. Large clumps of mucus usually come from the colon or rectum.

The color not only aids in diagnosis of intestinal motility, but also indicates the type of food eaten, occlusion of the bile ducts, and the presence of blood. Stools of milkfed individuals are light yellow; when

A persistently narrow caliber that gradually diminishes as time passes suggests anatomic stricture at or below the sigmoid.

Of less significance is the odor. This is noramlly feculant. A foul odor indicates protein putrifaction, and a piercing odor fermentation. The putrid odor of ulcerating carcinoma is often characteristic.

The reaction of the stool is usually acid with fermentation of carbohydrates, or alkaline with protein decomposition. Gas bubbles are found normally after the ingestion of such food as dried beans, whose starch granules pours undigested through

the small intestine and are broken down by caecal bacteria.

Parasites and eggs are occasionally found in the stools.

Secretory and absorptive functions are also tested by microscopic examination. Fermentative or putrifactive stools may be due to food that was not digested for lack of proper ferments. Microscopic examination may then be indicated. When the stomach juices are at fault, the fibrous elements of meat get through and the caecal bacteria break them down. The pancreatic juices, bile or rarely succus entericus may be dificient, and muscle or carbohydrate material pass into the large bowel. These food elements can be recognized in the stool, and a plain water enema will often secure them before bacteria in the caecum cause disintegration beyond recognition. Simple stains, as iodine for starches and Sudan III for fats may be used. The morphology of unstained specimens, however, is usually characteristic. Fibrin appears in strands, muscle fibers bear cross-striations, starches are usually in granules, and fat appears in droplets.

SUMMARY

The simplicity and value of stool analysis in preference to other gastrointestinal examination is pointed out.

A description of the intestinal content at different levels, based on fresh autopsy material, is given.

1. Schmidt und Strasburger, Feces d. Menschen.
2. Moymihan, Berkeley, Abdominal Operations,

Notes on Laboratory Diagnosis of the Intestinal Amoebae of Man

By MARY E. LARSON

Department of Zoology, University of Kansas

Obtaining material. Feces should be collected in a dry, clean container. It is of some importance to keep this material at body temperature or nearly so and placed in an incubator when brought into the laboratory if it connot be examined immediately. The active protozoa degenerate quite rapidly after passed in a stool.

Handling material. When handling material of this kind one should be reasonably careful. Always have access to a good disinfectant. Cysts may be present in the feces and they can easily get onto the hands or under the finger nails and in turn reach the alimentary tract. There are two distinct stages in the life cycle of an amoebae, the vegetative stage and the cystic stage. The vegetative stage is the active form which grows and reproduces. If these forms are swallowed they are destroyed in the stomach. When unfavorable conditions come about in the digestive tract the active amoebae become rounded and develop a cyst wall. It is this form which when passed with the feces resists adverse conditions and can then be dispersed in "night soil," by flies, insects, careless habits and poor sanitation. When food and water thus contaminated reaches the alimentary tract these well protected cysts are not destroyed in the stomach. During the formation of the cyst its nuclear content divides into daughter nuclei and when the cyst wall is dissolved each cyst releases several young amoebae into the intestine. There they grow rapidly and soon reproduce. The number of daughter amoebae differs with the species. It is hoped that this brief explanation will impress the worker with the need for reasonable care. It is also absolutely necessary to have a container of disinfectant at hand in which to drop all toothpicks, cover slips, slides, etc., used during the examination, as well as to destroy or preserve all remaining fecal material.

Methods of Examination. a. Fresh smears. An easy and convenient way to spread the smear is to use a toothpick. The point of the toothpick will pick up quite a bit of the material and then it is easily smeared over a clean slide. It is well to add a few drops of 0.7 per cent physiological salt, especially if it is not a very liquid stool. Cover the smear with a clean cover slip. If this smear is to have any diagnostic value it must be very thin, in fact so thin that print can be easily be seen through it. The smear will dry quickly if not covered. It is highly desirable to have a warm stage for the microscope, yet such an apparatus is not always accessible. The author has found it very satisfactory to use an electric substage lamp. By putting the scope mirror to the side, this box can easily be slipped in under the stage. It not only furnishes some heat, but excellent light as well. Because of the small size of the amoebae it is best to use the high dry objective (4mm). For the prepared slide the oil immersion lens is by far the best. After a little practice the amoebae, moving more or less slowly among the fecal material, can easily be distinguished. The pathogenic amoebae are active, but usually by the time the microscopic examination is made they have lost some of this activity.

It is important not only to demonstrate the presence of the amoebae, but to be able

to distinguish between the six different species of these protozoan parasites living in the upper part of the large intestine of man. It is especially necessary to be able to distinguish *Endamoeba histolytica* from the other five because there is no question but that it is the most serious one. It is a tissue destroyer. The other five are more or less hamless commensuls, but are often associated with diarrhetic conditions. Lately Kofaid has demonstrated that *Councilmania lafleun* is in part a tissue parasite.

b. Stained smears. If the organism can not be identified in a fresh smear, it is well to fix and stain the preparation. Remove the cover glass carefully or make a few fresh smears. Fix for 10 minutes in Schaudinn's solution (saturated aqueous solution of mercuric chloride, 200 cc.; 95 per cent alcohol 100 cc.; glacial acetic acid 15 cc. Heat to 65° C). Immerse in 70 per cent iodized alcohol 30 minutes to 24 hours; wash in water a few minutes; immerse in a 4 per cent aqueous solution of iron alum, 1 to 4 hours; wash again in water; transfer to 0.5 per cent aqueous solution of hematoxylin, 4 to 24 hours. To bring about differentiation treat the slide with a 2 per cent iron alum until enough of the stain has been removed. It is quite necessary to examine the slide frequently under the microscope. Wash well in water and pass up through the alcohols; clear in xylol and mount in balsam. There are several modifications of Schaudinn's alcohol sublimate iron-hematoxylin method and it is considered one of the most satisfactory.

A very valuable little handbook called, "Outlines of Medical Zoology," by Hegner, Cort, and Root, contains a great deal of information concerning the handling of this kind of material, the diagnosis of fresh smears and stained slides, descriptions, comparisons and illustrations which are invaluable for an intelligent diagnosis and understanding of this kind of work. "Animal Parasites and Human Disease" by A. C. Chandler, is a very readable book and contains good illustrations which bring out contrasting differences and likenesses in all the protozoa which are more or less pathogenic to man.

Comparisons. The following comparisons are taken almost verbatum from the "Outlines of Medical Zoology."

1. Living, unstained. Size of *E. histolytica*, 10 u, 30 u;

Locomotion of *E. histolytica*. When very fresh, locomotion slug like and rapid, difference between ectoplasm and endoplasm slight, very soon progressive locomotion ceases and thin hyaline blade like pseudopodia are explosively extended, with a sharp demarcation between ectoplasm and endoplasm. *E. coli*, slow; pseudopodia formed by the protoplasm flowing out slowly; with practically no difference between ectoplasm and endoplasm. Nucleus of *E. histolytica*. faint or invisible. *E. coli*, clearly visible unless obscured by food. Food of *E. histolytica*. Tissue elements, leucocytes, red-blood cells, no bacteria. *E. coli*, bacteria and debris, but no red blood cells or tissue elements.

2. Stained with hemotoxylin. Nucleus of *E. histolytica*. 4 u-7 u in diameter; karyosome small, centrally located; thin peripheral layer of chromatin. *E. coli*, 4 u-8 u in diameter; karyosome large, eccentrically located; heavy peripheral layer of chromatin.

3. Cyst stained with iron-hematoxylin. Diameter of Cyst of *E. histolytica* 5 u-20 u, *E. coli*, 10 u-30 u. Shape of Cyst of *E. histolytica* spheroidal. *E. coli* spheroidal. Nuclei in syst of *E. histolytica* 1-4 when mature, *E. coli*, usually 8. Lack of space forbids a comparison of these two with *Endolimax nana, Iodamoeba williamsi, Dientemoeba fragilis* and *Councilmania laufleria*.

There are several species of flagellates living in man. The technique employed for studying these is very similar to that used for the amoebae.

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Presentation Address

C. B. FRANCISCO, M. D.

At a meeting of the Jackson County Medical Society, November 30, 1926, the Alumni of the University School of Medicine presented a framed photograph of the Medical School building in Kansas City, Kansas, to tthe Society to be hung in its meeting hall. Dr. C. B. Francisco made the presentation address which follows:

In behalf of the Alumni of the School of Medicine of the University of Kansas, I present this picture of the Administration Building of that institution to the Jackson County Medical Society. This memento is given as an expression of the interest of the Alumni in this Society.

The School of Medicine of the University of Kansas has kept the faith that was bestowed upon it more than tweenty-one years ago. At the time of its beginning there was a revolution occurring all over the United States among the medical schools. That history is familiar to you and

need not be repeated here: but the University of Kansas has weathered the changes that have taken place and has been an outstanding factor in the progress of medicine in this local community of greater Kansas City and has extended its influence to other communities. It would be impossible to estimate what that influence has been, or what the result would have been had the University failed to "carry on." It may interest this Society to know that there are over 70 of its members that are former students of the University of Kansas School of Medicine.

The School has been forced to overcome many difficulties and its Alumni recognize that the heritage that was given the School at its inception has been a potent factor in its progress. They are confident that the School has reached a point where its advancement will be more rapid and where it is more sure. This fact has been recognized by Great Britain, in citing the University of Kansas School of Medicine as one of the 40 medical schools in the United States whose students are admitted to the final examination by the examining board in England. This report was published in the Journal of the American Medical Association, in the November 6, 1926, issue, page 1569.

As an evidence of the fact that the School has reached the point where its progress is assured I wish to show you a slide that reproduces the picture of what the University of Kansas School of Medicine will be in the near future; and to say that we as Alumni of this School can be proud of the past achievements of our Alma Mater and confident of its broadeer attainment in the future.

KANSAS UNIVERSITY CLINICS

Clinic of Dr. Clinton K. Smith

Instructor in Urology

CONSERVATIVE SURGERY OF BLADDER NECK OBSTRUCTIONS, INCLUDING PROSTATIC ENLARGEMENT

It has been customary to assume that difficulty of voiding in elderly men is mostly due to enlargement of the prostate, which, on account of this enlargement, mechanically plugs or fills the vesical outlet. With this conception in mind a radical prostatectomy seems the only logical method of relieving the condition.

However, since the cystoscope has become more frequently used in the preoperative study of these cases, it has been shown that not only is there a rather wide variation in the character of prostatic enlargement, but quite often other forms of bladder neck obstruction account for the difficulty in voiding. Furthermore, it is evident that in prostatic enlargement it is frequently not the enlargement of the prostate that is actually responsible for the patient's urinary embarrassment, but rather a fibrosis of the bladder neck, which fosters and leads to inflammation and edema of the prostate. It is not an uncommon experience in a case of acute retention wherein a large, soft, prostate is apparently the key to the obstruction problem, that after a week or so of suprapubic drainage, the prostate has almost disappeared. Comparatively recent studies of the action of the muscular structures of the bladder neck in voiding, particularly by Young and his associates, demonstrates that primarily a relaxation of the bladder neck proper occurs, together with a contraction of the trigone. The action of the trigone, whose muscular bundles pass through the lower aspect of the bladder neck and find attachment in the posterior urethra, is a shortening and thickening of this muscular structure in drawing the bladder neck open at the lower aspect. It flattens and stabilizes the bladder floor, allowing the urine to flow through the outlet into the urethra.

Normal bladder function is largely dependent on the normal action of this muscle and consequently, interference with its function is immediately reflected in disturbance of bladder function. This is why a small middle lobe, prostatic enlargement, which, strictly speaking, is an hypertrophy of subtrigonal glands, is productive of comparatively greater difficulty of urination than lateral lobe enlargement of a much greater degree.

The so-called "bar formation" which is also a thickening and fibrosis involving the submucous structures of the trigone—except that the thing is situated slightly distal to the vesical lip—is a frequent cause of urinary retention. Sclerotic change in the bladder neck, resulting in so-called "bladder neck contraction" or "collar neck" is also a common obstructive factor. All are a result of low grade, chronic inflammation, and are often the real factor in obstruction, rather than the prostatic enlargement.

It is with these three types of obstruction, which various observers have estimated as accounting for from thirty to sixty per cent of all bladder neck obstruction, usually designated as prostatic hypertrophy, that this discussion is concerned.

Recalling again to mind the character of the obstruction, and its influence on the normal action of the bladder neck action, it can be readily understood that a removal of the fibrotic tissue must permit of an improvement of bladder neck function.

In 1911, Young presented a punch designed for removing this type of obstruction through the urethra. While the instrument was successful in this accomplishment, severe bleeding often occurred. It was not until Caulk brought out his modification, cautery punch, in 1920, which eliminated hemorrhage, that consistent effort was made to appply this method, routinely, in cases of this type.

Caulk recently has estimated his ability to relieve approximately 60 per cent of his cases of bladder neck obstruction with this method. On first thought, this estimate appears high, but when it is realized that this procedure can be done in cases of such low vitality that a prostatectomy could not be considered, his figures do not seem extravagant.

I wish to present a typical case, which illustrates the value of the operation wherein a prostatectomy could not have been undertaken with any degree of safety.

April 28th, 1925, Dr. O., physician, age 65 years, who had always enjoyed unusually good health until about six years preceding his present illness. During this period he began to exhibit the usual symptoms of prostatic enlargement — nocturia, slow stream, etc. Also, he had occasionally noticed a shortness of breath. On arising to void during the night he was able with much straining, to expel only a few drops of urine, following which there was complete retention.

Examination the following day disclosed a much distended bladder, which was gradually emptied by retention catheter. Rectal palpation disclosed a large, smooth prostate. The patient was relieved of his distress but during the next twenty-four hours began to feel drowsy and short of breath. The pulse was irregular and weak, blood pressure—systolic 190, diastolic 0. He was confined to bed, stimulants given, but rapidly developed coma, with renal insufficiency. The blood chemistry was—creatinin 2.17 blood urea 45. The phthalein output, 2 hours intravenous, was 20 per cent. The patient continued in this condition during the following 10 to 12 days, with a retention catheter in situ. His condition was so grave that cystotomy was considered too hazardous. His condition gradually improved, however, until at the end of three weeks it seemed safe to make a cystoscopic examination. At this time his pulse was steady, systolic blood pressure was 160, diastolic 80. Blood urea 35, creatinin 1.8. Phthalein 2 hours intravenous 25 per cent.

Cystoscopy disclosed a moderate prostatic enlargement of the collar type, involving both lateral and middle lobes, with considerable ring-like contraction of the bladder neck. The patient still was unable to void. A cautery punch operation was advised, inasmuch as his condition did not warrant a prostatectomy, and as the cystoscopic picture indicated that the condition was favorable for this procedure. He was sent home from the hospital and retention catheter drainage continued till June 20th, during which period he made some further general improvement, and was able to get about the house. He was still, however, unable to void. At this time he again entered the hospital and three pieces of fibrous tissue were removed from the lower and lateral part of the bladder neck by the cautery punch. There was practically no bleeding. He had only slight reaction from the operation and was able to leave the hospital on the third day. He continued on retention catheter for two weeks, following which he voided freely and without difficulty. August 15th, his residual urine was 30 c.c. His general condition steadily improved and he was able to resume practice. His condition has remained satisfactory except at the present time his urine contains considerable pus—it had previously been clear. Catheter discloses a residual of 50 c.c. Further removal of the obstruction by punch will materially lessen this residual urine if not altogether rid him of this retention.

The essential points of interest in this case are—First—The extremely poor condition of the patient, both in cardiac and renal actions. It is doubtful if any amount of preparation could place him within the bounds of safety as a prostatectomy risk, but by this procedure we have already been able to give him a year of useful life which he otherwise would have been very likely denied. Second—the successful re-establishment of bladder function by the punch operation, although the history and physical findings were typical of the usual case in which prostatectomy is done. Although several sittings are usually required to rid the average patient of residual urine, still, the benign character of the operation as compared with prostatectomy, easily overbalances this factor. Even should the pa-

tient have been a suitable risk for prostatectomy, it is decidely questionable but that the punch would have been preferable for economic reasons alone. Certainly in cases of bar formation or bladder neck contraction, it is preferable for the paramount reason that the removal of the obstruction can be better accomplished than by enucleating the prostate.

Clinic of Dr. C. C. Nesselrode

Department of Surgery

SURGICAL CARE OF BUERGER'S DISEASE

We present this morning the case of Mr. F. L., age 36 years, who, for the past several years, has had recurring attacks of pain involving the feet, most marked in the right leg. This is a typical case of Buerger's disease or presenile gangrene.

Before proceeding with the amputation, we desire to consider the history of this patient for a few minutes. The history is of attacks of repeated pain, the pain most marked in the right foot and usually induced by exercise; however, the pain does occur independent of exercise; is so severe as to render this man a charge upon society.

There is a complete obliteration of the pulse in both the dorsalis pedis and the branches of the posterior tibial. Approximately a year ago, this man was in another hospital in this city, where there was done a Periarterial Sympathectomy, the operation as described by Leriche. Following this operation, there was no improvement; pains continued as frequent and severe as before.

Four days ago, under local anesthetic, we exposed the right femoral artery in Hunter's canal, for the purpose of injecting a solution of sodium iodid and procuring an x-ray picture of the vascular tree of this limb. On exposing the artery in the area affected by the Leriche operation, there was a marked increase in fibrous tissue about the artery, and it was with some difficulty that the sodium iodid injection was made. The picture herewith presented is the result of that injection and shows a complete blocking of the anterior tibial, at a point some two inches below the point at which it leaves the posterior tibial; and further, an occlusion of the posterior tibial, at a point below the middle of the tibia. It appears to us to be an entirely futile thing to resort to a perivascular sympathectomy in a case where there is such complete obliteration of the arterial tree.

A visualization of the vascular tree of the affected limb as evidenced by this picture, is of great value in determining the level of amputation. The amputation should be done thru a level with an adequate circulation. A thrombo angitis of this type is usually progressive and the amputation should accomplish the removal of the affected portion of the vessel. It is usually the case that to accomplish this and secure a stump that will heal, the amputation is above the level of the knee.

We were much interested in the suggestion recently made by Dean Lewis, based upon the fact that collateral circulation is the only saving factor in these limbs. His suggestion was, previous to amputation, a ligation of the femoral in Scarpa's triangle just below the giving off of the deep branch. We have not had an opportunity to try this and shall not try it in this case, because of the condition of the foot below. The amputation is the classical amputation thru the lower third of the thigh, and needs no special consideration.



Given a case of Buerger's disease, if in the early stages, I would try rest, postural treatment, and certain local measures which include the production of active or passive hyperemia by baking, superheated air, elec-

tricity, heat by diathermy, alternating hot and cold water, etc., etc.;or the application of the tourniquet, Bier's method. As to drugs: Benzyl benzoate, because of its antispasmodic properties, has improved some of these cases. Meyer has advocated the production of hydremia, employing as much as eight to ten quarts of Ringer's solution administered subcutaneously or by duodenal feeding.

There are certain surgical treatments that have been suggested, including alcoholic injection or division of the nerves for pain, periarterial sympathectomy, ligation



of the femoral veins, arterio-venous anastomosis, and amputation. Our experience has been limited to periarterial sympathectomy and amputation. Ligation of the femoral vein is made in the hope that, by requiring all blood to be returned by the superficial veins, it will keep more blood in contact with the anemic tissues. It has never seemed to us to be a logical treatment.

Arterio-venous anastomosis likewise has not appealed to us. In 1917 Steten[1] studied published reports of one hundred thirty-six cases. There were thirty deaths following the operation and eleven more following the amputation made necessary by the performance of the operation. There was thus an operative mortality of thirty per cent and forty-five other cases required amputation. It has been shown that the veins are involved almost as frequently as the arteries, and it would seem questionable to advocate the switching of the circulatory flow from diseased arteries into veins which were probably diseased in a like manner.

We are interested to note later that Leriche is recommending periarterial sympathectomy as the means of sterilizing chronic ulcers, stating that by the performing of a perivascular sympathectomy a sterilization of the bed of the chronic ulcer is accomplished by the end of the fifth day, and soon thereafter skin grafting completes the rapid healing of the same. While we have not yet tried this recommendation of Leriche, it seems to us rather fantastic.

It has been quite well established by the work of Potts, Kramer, and Langley that the nerve supply to the arteries of the extremities is segmental in its arrangement, and that there is no physiological or anatomical explanation for the remarkable results claimed by Leriche.

Accepting the work of Potts and Kramer, Kanavel has recently suggested that it is more in keeping with our anatomical and physiological knowledge to remove the post-peritoneal sympathetic ganglia than to attack the periarterial plexus. Our experience with the Leriche operation would lead us to believe that its value is confined to a very small number of cases, and that it is at the present time being used far too promiscuously.

It is our judgment that, as practiced by Leriche, it has not a sound anatomical or physiological basis upon which to rest, and that in the early stages of this disease, one must resort to the practices above referred to; or upon the suggestion of Dean Lewis; or possibly the ganglionectomy of Kanavel; that in the event of the failure of these, that one faces the necessity of amputation. We desire, also, to stress the value of the x-ray in demonstrating the circulation of the limb, as an aid to determining the site of amputation.

1. Stetten: The Futility of Arterio-Venous Anastomosis in Treatment of Impending Gangrene of the Lower Extremity. Surg. Gyn, & Obs., 1915, XX, p. 381.

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Stroganoff (Am. Jr. Obs. & Gyn. June) says that in eclampsia saline injections are dangerous on account of nephritis and indangerous. Injections of 500 c.c. of a 5 jections of glucose solutions also perhaps per cent glucose solution is more dangerous than useful since it causes a rise of blood pressure and unnecessary irritation.

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ANNUAL DUES ARE PAYABLE ON JANUARY 1. IF THEY ARE NOT PAID BY FEB. 1 THE MEMBER IN ARREARS IS SUSPENDED.

OUR MEDICAL SCHOOL

A little more than twenty years ago the state of Kansas accepted plots of ground at Rosedale and established a medical school plant. At this time there were five fairly well established medical schools in the territory adjacent to Kansas City. Of these the Kansas City Medical College (Missouri), The College of Physicians and Surgeons and The Medico Chirurgical College were merged to form the University of Kansas School of Medicine. The University Medical College of Kansas City, Missouri, and the Kansas Medical College, Medical Department of Washburn College at Topeka remained in the field, until after several years of struggle against the efforts of the University authorities, the Council on Medical Education of the A. M. A. and the Carnegie Foundation to give the new School of Medicine a clear field in the territory allotted to it, the Kansas Medical College surrendered and was merged with the University of Kansas School of Medicine and the University Medical College closed its doors.

Thus did Kansas assume an obligation to supply the territory formerly covered by these other institutions with a medical school, but with a better and higher grade school than any of those that had been absorbed or compelled to close. For it was on the theory that the State of Kansas could and would develop and maintain a high grade medical school that the field was cleared.

There is intended no suggestion here that there is any purpose on the part of the State to repudiate this obligation. On the contrary the considerable investment already made in the medical school plant evidences an acceptance of its responsibility. It has seemed at times, however, that progress in the development of the medical school was extremely slow, that those upon whom the obligation rests were not fully convinced of the importance of this particular one of the State's projects. If one were to imaginee himself in the position of one of our legislators he might consider that there were ample reasons.

In the first place, the people of the state are burdened with taxes—and they will continue to be until a rational system of taxation has been formulated—but the responsibility for reducing taxes has been assumed by nearly every member of the legislature and nearly every public officer—that was the slogan in the campaign—and he does his best to fulfill his pre-election promises. Naturally he is slow to vote for appropriations for which there is no very urgent and consistent demand.

It must be admitted that no general demand has been made by the people for the development of the medical school, nor have the doctors in the state seemed very aggressive in the matter. In fact, it has been easy for a representative to explain his vote against an appropriation for the medical school on the ground that the doctors in his district did not seem to care anything about it. He might, or might not, have voted differently had the doctors among his constituents advised him that the medical school was a valuable asset to the citizens of the state as well as to the doctors. At any rate there is an excellent opportun-

ity for every doctor in the state to find out how much his opinion is worth in the community and to his representatives in the legislature. Why not try it out once?

Some years ago a governor of the state of Kansas vetoed an appropriation for the Merical School on the ground that it cost too much to make doctors in Kansas. It is doubtful if any member of the legislature or many citizens of the state now regard the medical school as simply a place where men are prepared to practice medicine. Of all the state's professional schools none renders a greater direct or indirect service to its citizens. The hospital, which is an integral part of the teaching plant, is of more direct service to the people of the state than all of the other professional schools combined.

But, for the sake of argument, grant that the school is conducted for the benefit of the medical profession alone. All the money that has so far been expended and all that is likely to be expended during the next twenty years is a very small payment on the public debt to the doctors of the state.

In the March, 1926, number of the Journal was published an article on "The National Doctor Bill—The Public Debt," prepared by the "Physician's Home Inc." in which an effort is made to evaluate the gratuitous services of the medical profession. New York was taken as a basis for estimate and by determining the number of free hospital days at 107 of the 140 odd medical and surgical serving institutions giving some portion of charity service and evaluating the physicians' service nationally upon the hypothesis that outside of New York City a pro rata service in quantity is given equal to fifty per cent, it was determined that the annual national bill due the doctors would be $135,553,554. It will be noted that this is for institutional services alone and does not include the gratuitous services rendered by physicians to private patients in the regular line of practice, which is a very considerable item and in many sections of the county will amount to considerable more than that upon which this estimate is based.

Taking the gross estimate as it is given ($135,553,554) and divide it by the total number of registered physicians reported as 105,000, and we have $821 as the value of the gratuitous services given each year by each of those 165,000 physicians. The last A. M. A. Directory has listed 2,364 physicians registered in Kansas. This number multiplied by 821 gives us $1,940,844 as the annual contribution to the care of the state's sick and needy. In other words, the medical profession has reduced the state's burden of caring for its sick poor to the extent of nearly two million dollars annually.

If the development and maintenance of the medical school shall be regarded as for the benefit of the medical profession alone it is but a very small return on the amount it has saved the state. During the twenty years it has been in existence the state has not expended an amount equal to six per cent of each annual contribution by its registered physicians. Six per cent of $1,940,844 is $116,450.64 which multiplied by 20 is $2,329,000.

The grounds, buildings and equipment of the school and hospital represent an investment of $850,000 and if the cost of maintenance be calculated at $60,000 a year, which is an over estimate, the total expense to the state for the twenty years would be $2,050,000. In the same number of years the doctors of Kansas have contributed, to the care of its sick poor, services equivalent to $38,816,880.

There is no reason why the doctors in Kansas should not unhesitatingly ask the legislature for such appropriations as are needed to put the medical school in the best possible condition, whether on the theory that its benefits fall mostly upon the citizens of the state or upon the medical profession of the state.

Your representative is a reasonable man, he wants to do what is best for the people he represents, and he will listen to your argument if you have any to present.

Every doctor has some influence in his

community and every community is interested in its doctors for upon their skill and ability sometimes depends the lives of their loved ones. When it is understood how much may be added to his ability and his resources by the medical school the community will support him in his demands for its proper development.

CHIPS

Cooke (Arch. Derm. & Syph. Nov.) says "the common erythematous dermatitis of the gluteal region in infants described by Jacquet is caused by ammonia in the diaper, and is, therefore, a dermatitis venenata. The ammonia is formed in the wet diaper in situ by the growth of a saprophytic bacillus which splits the urinary urea into ammonia. This bacterium is derived from the intestinal contents and infests the diaper area as a result of soiling by feces. The use of diapers dried after impregnating with an antiseptic such as mercuric chloride (1:4000) causes a prompt cessation of ammonia formation and a rapid regression of the skin lesions."

Kii and Taniguchi noted that in prevaccinated persons the site of vaccination would manifest a reactive reddening, rash-like appearance with, sometimes, infiltration and itching. This manifestation reached its climax in from 24 to 48 hours then gradually disappeared, but the vaccination was negative. They considered this manifestation might be vaccine allergy and might be utilized as an index of immunity.

Platou and Rigler (Arch. Int. Med. Nov.) report their experience in the treatment of erysipelas with the roentgen rays. They claim that roentgen-ray therapy applied to the affected part produces a rapid improvement in both the local and the systemic manifestations with a reduction of temperature to normal in from one to two days. Compared with a group of cases treated by routine methods the cases treated by roentgen-rav therapy showed very much better results.

The total deaths from heart disease in the registration area (comprising 89.4 per cent of the country), were 191,226 in 1925, and 176,671 in 1924. Nephritis deaths in 1925 were 99,320, and in 1924 were 88,863. Pneumonia, in 1925, was the cause of 96,432 deaths, and in 1924 of 97,403. Cancer and other malignant tumors caused 95,504 deaths in 1925, as compared with 91,138 in 1924. In 1925 tuberculosis deaths were 89,-268, a decrease, in numbers, from 1924, with 89,724. Deaths from cerebral hemorrhage and softening of the brain were 87,064 in 1925 and 91,941 in 1924.

Establishment of a national institute of health, is proposed in a bill (House bill No. 15,477) introduced in the House by Representative Kindred (Dem.), of Astoria, N. Y. The measure also would authorize increased appropriations for the Hygienic Laboratory and proposes that the Government accept donations for use in ascertaining the cause, prevention, and cure of disease affecting human beings. An appropriation of $1,000,000 is asked to establish the proposed institute, and $200,000 a year for five years, to construct new and enlarged quarters for the Hygienic Laboratory.

The Council on Physical Therapy of the American Medical Association is now ready to consider devices for physical therapy. The consideration of apparatus will be governed by Official Rules, designed to protect the medical profession and the public against fraud, undesirable secrecy and objectionable advertising in connection with apparatus and methods for physical therapy. Devices and methods that have been found acceptable as conforming to the rules will be described in an Accepted List. (Jr. A. M.A., Dec. 11, '26).

Reduction of weight should not be undertaken by means of thyroid alone. Dietary procedures form the basis of all scientific and rational reduction methods. In some instances, when diet will not suffice, thyroid may be used. When prescribing the drug physicians should make certain that they will be supplied with the U. S. P. product and small doses should be given at the beginning, watching the pulse and nervous system. Thyroid is always a double edged sword and must be used with caution. (Jr. A.M.A., Dec 18, '26).

The available evidence points against the efficiency of the products that have been included in the cod liver oil extract category. Vitamins A and D, in which cod liver oil abounds, tend to dissolve with readiness in fats or fat solvents. The so-called extracts are usually at best weak alcoholic fluids of very doubtful solvent power so far as the vitamins referred to are concerned. The malt extracts that may be incorporated with the proprietary mixtures may have potencies that cannot, however, be identi-

fied with the specific characteristics of the cod liver oil. Recently, vitamin concentrates have been prepared from cod liver oil by saponification of the latter, the potent substances being contained in the nonsaponifiable fractions. Such a cod liver oil concentrate has been accepted by the Council on Pharmacy and Chemistry. (Jr. A.M.A., Dec. 11, '26).

SOCIETIES

RICE COUNTY SOCIETY

The Rice County Medical Society held its annual meeting at the Lyons Hospital, December 23. On account of the weather the attendance was not as large as usual. Two interesting papers were read, one by Dr. Maggie L. McCrea of Sterling on "Physio-Therapy", and one by Dr. W. E. Currie of Sterling, on "The Business Side of Medicine." Both papers were thoroughly discussed.

The following officers were elected for the coming year: President, Dr. J. M. Little, Sterling; Vice President, Dr. D. T. Muir, Alden; Secretary-Treasurer, Dr. C. E. Fisher, Lyons; Censors, 3 years, Dr. L. E. Vermillion, re-elected. The Executive Committee is to select a member to present a paper at the next meeting of the State Society.

The Society voted as an objective for next year, "A full time health unit for Rice County." Since it has been conclusively shown in our own state that such measures materially reduce communicable diseases, with their economic loss and deaths, the Society believes it good business and a humanitarian principle as well, to manifest at least as much concern in the protection of our children as we do for our livestock. The Society will be on the job until it is put over.

HARVEY COUNTY SOCIETY

The regular monthly meeting of the Harvey County Medical Society was held on Dec. 6, 1926 at the office of Dr. R. S. Haury, Newton, Kans., following dinner together at the Fred Harvey hotel. There were fifteen doctors present. Only one out-of-town member was able to get to the meeting because of the very bad condition of the roads. Election of officers for 1927 resulted in the following: President, Wm.S. Schroeder; Vice President, Dr. Melvin C. Martin; Secretary and Treasurer, Harold M. Glover; delegate, Dr. Lawrence C. Smith; censor, Dr. F. G. Bartel. The report of the board of censos being favorable in the case of Dr. L. E. Peckenschneider and Dr. N. R. Smith of Halstead, Kans., it was moved by Dr. Haury that they be elected to membership in this society; motion seconded by Dr. Entz. Motion carried. The following papers were read: Fractures by Dr. Richard S. Haury and Plastic Surgery by Dr. Jno. L. Grove. General discussion of the papers followed and the meeting adjourned.

H. M. Glover, Sec'y.

MEADE-SEWARD COUNTY SOCIETY

The Meade-Seward Society met December 17, 1926 and elected the following officers for 1927: F. W. Huddleston, President and Ben H. Day, Liberal, Secretary.

STAFFORD COUNTY SOCIETY

Society met in St. John, Dec. 15, on special call with the following members present: F. W. Tretbar, J. J. Tretbar, W. L. Butler, T. W. Scott, F. M. Shonkwiler, Stafford; M. M. Hart, Macksville; R. E. Stivison, J. T. Scott, St. John.

The following officers were elected for 1927: M. M. Hart, President; F. M. Shonkwiler, Vice President; J. T. Scott, Secretary and Treasurer; Delegate State Convention, J. J. Tretbar; Alternate, W. L. Butler; Censors, M. M. Hart, W. L. Butler, J. T. Scott. The Society voted to have a public meeting the second Wednesday in January, preceded by a luncheon to society members and their wives at the Christian Church. This meeting will be addressed by Dr. E. D. Ebright on the subject, "What can be done for crippled children." Dr Ebright is an Orthopedic Specialist of Wichita. The Society expressed unanimous approval of the holding of public meetings in connection with the regular monthly meetings as the most practical means of instructing the public regarding the achievements of scientific medicine.

Dr. J. T. Scoot read a paper on Blood Pressure which was discussed by every member who voted to request its publication in the Kansas Medical Journal.

This was one of the best meetings of the year and a demonstration that the members are in favor of enlarging the activities of the Society.

J. T. Scott, Sec'y.

WILSON COUNTY SOCIETY

The Wilson County Medical Society held its regular December meeting at the Loether Hoetl, Fredonia, evening of Dec. 13. A poor attendance account the near-zero

weather but after a dandy chicken dinner we had a profitable meeting.

Election of officers resulted as follows: Dr. W. H. Young, Fredonia, President; Dr. J. W. McGuire, Neodesha, Vice President; Dr. E. C. Duncan, Fredonia, Secretary and Treasurer.

The dues for 1927 is $7.00—$5.00 to State Society and $2.00 for local society.

Dr. Wiley reported regarding the petition which the Fredonia members of the Society presented to the County Commissioners regarding new building at County Farm. It was necessary to have 2500 names and the members of this society secured the necessary signatures without help from any one outside. It was quite and undertaking as any one knows who attempts to get 2500 signatures to a petition where any taxation problem is involved.

Dr. O. D. Sharpe read a paper by Drs. Duke and Dively of Kansas City regarding multiple infections. It was certainly a fine paper and we thank Drs. Duke and Dively very much; we hope some time this year to have one of them address our Society.

We have several members who do not attend our meetings; we believe these members are missing something they ought to have and we sincerely hope that 1927 will find them in regular attendance.

It was left to the Secretary to select the next meeting place for our January meeting.

E. C. Duncan, Sec'y.

SEDGWICK COUNTY SOCIETY

The annual meetiing and banquet of the Sedgwick County Medical Society was held at Hotel Lassen, Wednesday evening, December 8. There were about seventy-five members presnt.

Dr. J. E. Rowan read a paper on "Fractures of the Skull."

The following officers were elected for the ensuing year: President, H. F. Hyndman; Vice President, C. E. Ross; Secretary, W. J. Eilerts; Treasurer, H. H. Olson; Censors, J. D. Clork, E. H. Terrill and Arch D. Jones; Delegates, Chipps, Jones, Ebright, Johnson, Warren, Gardner and Bishop.

Regular meetings will be held every two weeks.

BOURBON COUNTY SOCIETY

The Bourbon County Medical Society met in regular session at the Goodlander Hotel and partook of their annual turkey dinner.

We had as visitors, Dr. C. C. Conover of Kansas City, Drs. Green and Shumway of Pleasanton, Dr. Morrison of Richards, Missouri, and Drs. Marchbanks, Church, Smith, Gibson, Hicks, Rush and Cameron of Pittsburg.

After the banquet we were favored with an excellent talk on Nephrosis by Dr. Conover. Dr. Newman introduced Dr. Aikman as the Dean of Medicine in Bourbon County, he having practiced here for fifty years and was a charter member of the Kansas Medical Society. Dr. Conover was elected an honorary member of the Society.

The annual election of officers was held and the following officers were elected: President, Dr. C. L. Mosley, Fort Scott; Vice President, Dr. E. E. Anderson, Fort Scott; Secretary-Treasurer, W. S. Gooch, Fort Scott; Censors, Drs. E. B. Payne, J. D. Hunter, W. T. Wilkening; Delegate, Dr. R. O. Crume; Alternate, J. R. Newman.

W. S. Gooch, Secretary.

SALINE COUNTY SOCIETY

The regular meeting of the Saline County Medical Society was held at the Lamer Hotel, Salina, December 9.

Following the dinner and the routine business, the following officers were elected: President, C. M. Fitzpatrick; Vice President, R. E Cheney; Secretary, E. G. Ganoung; Treasurer, H. E. Neptune; Censor, O. R. Brittaink; Delegates to State Society, J. K. Harvey, E. G. Ganoung; Delegate Alternate to State Society, W. R. Dillingham, O. D. Walker.

Dr. J. K. Harvey, as chairman of a special committee, reeported that a school free clinic was neither necessary nor desirable. The report was accepted.

Treasurer's report was read by Dr. H. E. Neptune, and accepted and filed.

A program committee composed of the President, the Secretary and Dr. W. E. Mowery was selected.

Dr. Nelse F. Ockerblad of the faculty of the School of Medicine of the University of Kansas gave a most interesting illustrated discourse on Lesion of the Urinary System.

E. G. Ganoung, Secretary.

DECATUR-NORTON COUNTY SOCIETY

The annual meeting of the Decatur-Norton County Society was held at Norton on December 2. In the morning a child's clinic was conducted by Dr. E. L. Timmons of Colorado, at the Methodist Hospital, where a luncheon was given at 12:30 by the hospital staff and board.

12:30—Luncheon at Methodist Hospital, guests of the hospital staff and board.

2:00 p. m.—Business meeting, Commercial Club rooms, at which the following doctors were elected to membership: Dr. M. J. Renner, Goodland; Dr. Benj. I. Morris, Morland; Dr. E. R. Beiderwell, St. Francis; Dr. E. F. Leininger, Atwood; Dr. C. L. Piper, Oberlin; Dr. Walter J. Singleton, Brewster; Dr. G. A. Leslie, McDonald.

Dr. Lowis, owing to illness, was not able to give his annual address.

Dr. J. F. Hassig, Secretary of the Kansas State Medical Society, read an excellent paper on "Business and Ethics."

Dr. E. L. Timmons of Colorado Springs read a splendid paper on "Nutrition and Its Relation to Health."

Dr. F. A. Carmichael of Osawatomie, President of the Kansas State Medical Society, made a worth while talk on the Medical Practice Act.

Dr. Hassig and Dr. Timmons were elected honorary members of the Society.

The following officers were elected for the ensuing year: President, Dr. J. A. H. Peck, St. Francis; Vice President, Dr. C. W. Cole, Norton; Second Vice President, Dr. H. S. Bennie, Almena; Secretary and Treasurer, Dr. C. S. Kenney, Norton; Member, Board of Censors, Dr. I. L. Parker, Hill City; Delegates to State Society, Dr. W. J. Lowis, Colby; Dr. J. A. H. Peck, St. Francis; Alternates, Dr. F. H. Smith, Goodland; Dr. H. O. Hardesty, Jennings.

Thirty-nine doctors and five visitors were present. This was one of the most successful meetings ever held by the Decatur-Norton County Medical Society.

C. S. Kenneey, Secretary-Treasurer.

SHAWNEE COUNTY SOCIETY

The Shawnee County Medical Society met at Stormont Hospital, Monday evening, January 3, 1926. The following program was given:

Actinomycosis of the Palate (Clinical Case), Dr. W. M. Mills.

Blood Transfusion, Dr. A. H. Marshall.

Infant Feeding, Dr. M. G. Sloo.

Earle G. Brown, Secretary.

MEDICAL SCHOOL NOTES

Dr. Thomas G. Orr was appointed a member of the Advisory Committee on Motion Pictures, for teaching purposes, by the American College of Surgeons. He was also appointed a member of the Board on Traumatic Surgery by the American College.

Dr. Udo G. Wile, Professor of Dermatology in the University of Michigan, talked to the students of the Medical School and also to the Academy of Medicine, Saturday, December 11, 1926.

Dr. N. F. Ockerblad read a paper on "The Use of Ephedrin in Spinal Anaesthesia," before the Academy of Medicine, in December. He also read this paper before the Southwest Branch of the American Urological Society, at St. Louis, November 1, 1926.

Dr. Russel L. Haden talked to the New York Dental Society, on "Focal Infection," at New York City, November 6, 1926.

Dr. Arthur E. Hertzler held a Goitre Clinic in Appleton, Wisconsin, last month.

Dr. O. S. Gilliland was recently re-elected Secretary of the Jackson County Medical Society.

At the meeting of the Southern Medical Association, in Atlanta, Georgia, November 15 to 18, the Jackson County Medical Society was represented by several members who appeared on the program in various sections. The following members of the Faculty read papers:

Dr. Frank C. Neff on "Effect of Blood Transfusion in Certain Streptococcus Infection."

Dr. Charles C. Dennie on "Familiar Syphilis."

Dr. H. R. Wahl on "Some Unusual Pigmentary Disturbances."

Dr. R. L. Sutton opened discussion on a paper by Dr. Aldo Castellani, from New Orleans, La.

Dr. H. L. Dwyer was Secretary of the section on Pediatrics and Dr. H. R. Wahl was Vice-Chairman of the Section on Pathology at this meeting.

DEATHS

Emil T. Erickson, aged 43, died November 22, 1926, in Caldwell, Kansas. He graduated from the University of Kansas School of Medicine in 1908 and had practiced in Caldwell since 1912. He was a member of the Kansas Medical Society.

C. Fremont Cronk, Wichita, age 65, died in October of chronic nephritis. He graduated from Rush Medical College, Chicago, in 1891. He was a member of the Kansas Medical Society.

W. H. Harrison, Herington, aged 62, died October 31, at the Presbyterian Hospital, Chicago, of dilation of the heart. He grad-

uated from the University Medical College, Kansas City, Missouri, in 1897.

Andrew Bennie, Almena, aged 68, died at the Methodist Hospital in Norton, Kansas, December 21, 1926, from rupture of the esophagus. He graduated from the University of Nebraska College of Medicine, Lincoln, in 1885. He was one of the oldest practicing physicians in northeast Kansas. He was a member of the Kansas Medical Society.

—B—

Diphtheria in Kansas

Preliminary reports of the Division of Communicable Diseases show a marked decrease in diphtheria during 1926 in comparison with any previous record of the Kansas State Board of Health.

The following table showing the morbidity and mortality from diphtheria is of interest for several reasons:

Year	Cases	Deaths
1922	4069	283
1923	2625	151
1924	1707	88
1925	1101	71
1926	874	45 estimated

As far back as our records are available no downward trend occurred for five years in succession, although we have had antitoxin available as the treatment for the past 25 years.

It is only when we compare the outbreaks in recent years with the sickness and deaths from the same disease some years ago, that we are able to realize what dividends are being paid to the people of the state in the way of health and the freedom from disease, as a result of the steady persisent fight against communicable diseases by the Kansas State Board of Health and the medical profession backed by the intelligent cooperation of the people of Kansas.

"Parents are realizing that it is possible to prevent diphtheria by having their children protected against it by the use of toxin-antitoxin, and are availing themselves of the opportunities offered. Not only life but health is being saved, because the damaging after effects are often more disastrous than the disease itself."

The following counties have reported the number of immunizations for 1926 as follow:

County	No. Immunized
Stafford	99—School Boards arranged for immunizing two districts.
Coffey	125 — Physicians of County.
Cherokee	3500—Health Officer.
Labette	1898—Physicians of Parsons also several rural school Districts.
Montgomery	4000 — Physicians: Coffeyville, Caney, City Health Officer Cherryvale, Liberty School District.
Osage	419—Osage City, Carbondale and three rural school districts.
Shawnee	1000—Topeka Health Officer and physicians.
Wyandotte	2577—Kansas City Health Officer.
Jefferson	952—Physicians and full time Health Officer.
Doniphan	400—Health Officer and Physicians.
Nemaha	115—Oneida School district.
Wabaunsee	2500 — County Commissioners and school districts cooperating.
Barton	125 — Physicans and Health Officer.
Kingman	2306—Health Officer—County Commissioners co-operating.
Lyon	1500—Health Officer—Full time.
Geary	1198 — Health Officer—Full time.
Ottawa	1400 — Health Officer—Full time.
Dickinson	800 — Herington Women's Club—Physicians co-operating.
Douglas	750 — Health Officer—City of Lawrence.
Ellis	1242 — Health Officer—Full time.
Butler	1054 — Health Officer—
Neosho	143—Thayer school districts—three rural school districts.
Johnson	6—Rural school districts.
Total	28,109

No definite records are available on the number immunized in the state by the family physicians during the past year but from reports received from counties and from private physicians at least 10,000 additional children received the treatment who are not listed in the above table.

Jefferson, Cherokee, Butler and Ellis County are continuing their immunization program through the month of January, 1927.

The Franklin and Wilson County Medical Societies inaugurate their immunization

work this month, the toxin-antitoxin to be given the children at stations established in different parts of the county.

C. H. Kinnaman, M. D.
Epidemiologist.

BOOKS

Shell Shock and its aftermath, by Norman Fenton, Ph.D., Associate Professor of Psychology, Ohio University. Published by C. V. Mosby Co. St. Louis.

The author through his connection with Base Hospital 117, A. E. F. in France came in contact with many cases of war neurosis and afterwards found it possible to make a follow-up study of these cases. The results of his study of some three thousand such cases are presented in this book.

It should be of considerable value in the management of the psychoneuroses of civil life.

The Practice of Preventive Medicine by J. G. Fitzgerald, M. D., Professor of Hygiene and Preventive Medicine. University of Toronto. Edited by Peter Gillispie and H. M. Lancaster. Second Edition. Published by C. V. Mosby Co., St. Louis, Missouri.

One of the purposes of this book is to emphasize the necessity for a broader knowledge of preventive medicine and to stimulate an interest in its problems. In this edition some of the chapters have been revised and material which formerly appeared in the appendix is included in the general text. It is a very complete exposition of the subject.

Physiology and Biochemistry in Modern Medicine, by J. J. R. Maclead, M.B., L.L.D., D.Sc., Professor Physiology in the University of Toronto. Fifth Edition. Published by the C. V. Mosby Co., St. Louis, Missouri.

This book has been thoroughly revised. A chapter on the physiology of the special senses, by Olmstead, has been added and the section on the neuromuscular system by Redfield has been expanded. Chapters on blood, respiration, ductless glands, and the metabolism of the carbohydrates have been rewritten. In its completeness this book is the outstanding work on this subject today.

International Clinics, a quarterly of illustrated clinical lectures and especially prepared original articles edited by Henry W. Cattell, M. D., with numerous collaborators. Vol. IV, Thirty-sixth series. Published by J. B. Lippincott Co., Phila.

There is an article on infection in diabetes that is worth while and another one on the danger of lumbar puncture that seems very timely. An experimental study concerning the etiology of certain defects of the limbs is instructive. There is also a report on some experimental tumor research, a paper on the anatomy of endemic goiter, a paper on pelvic infection, one on cirrhosis hepatis, one on the treatment of diseases of the heart, one on the prognosis of functional heart disease, one on bundle branch block, one on acute lymphatic leukemia, and numerous others that are both interesting and instructive.

Medical Record Visiting List, Published by Wm. Wood & Company, New York City. Price $1.75 to $2.50.

This is a very convenient pocket diary with pages arranged to accomodate from 30 to 90 patients per week. There are also several convenient tables and some very valuable information frequently desired at a moment's notice.

Sketch of the history of the Mayo Clinic and the Mayo Foundation. 185 pages. Cloth, $3.50. W. B. Saunders Co., Philadelphia.

This contains a short sketch of the Mayo family and a quite complete history of the origin and development of the Mayo Clinic and the Mayo Foundation. It will be of much interest to those who have made frequent visits to Rochester and are familiar with the work there.

General Index Volume of the Collected Papers of the Mayo Clinic and the Mayo Foundation. 1884 to 1925 inclusive. Octavo volume of 227 pages. Philadelphia and London: W. B. Saunders Co., 1926. Cloth $5.00 net.

This index volume will add very materially to the value of the published volumes of collected papers. The papers are indexed by subjects and by authors and the index is very complete.

Diseases of Women, by Harry Sturgeon Crossen, M.D., Professor of Clinical Gynecology, Washington University Medical School. Published by C. V. Mosby Co., St. Louis.

The author has found that the use of iodinized oil for x-ray visualization of the uterine and tubal cavities has made a distinct advance in gynecologic diagnosis, particularly in determining the site of tubal occlusions causing sterility. Considerable new matter has been added to this—the sizth edition of this work. It is particularly well illustrated.

History Taking and Recording, by James A. Corscaden, M.D. Published by Paul B. Hoeber Inc. New York City. Price $1.50.

This little book could be profitably studied by most of us. Except to those whose practice is largely in a hospital history taking and recording is a matter is a matter of less concern than it should be. Many of us

know too little of how it should be done. This is a very concise description that will certainly be of great help to such of us.

The Normal Child and How to Keep it Normal in Mind and Morals, by B. Sachs, M.D. Publised by Paul B. Hoeber Inc., New York City. Price $1.50.

"Children raised on purely scientific methods by mothers, endowed with a smattering of psychology, have often been misfits in a social and family sense," so says the author of this book and most of us will readily agree with him. His analysis of the problem before every patient is clear and logical.

The Medical Clinics of North America (Issued serially, one number every other month.) Volume X, Number III, (Mayo Clinic Number, November 1926). Octavo of 275 pages with 55 illustrations. Per clinic year, July 1926 to May 1927. Paper $12.00; Cloth, $16.00 net. Philadephia and London: W B. Saunders Company.

Of particular interest in the November number of the Medical Clinics is a paper by Rowntree and Snell on glandular deficiences; a paper by Virison and Lemon on lipiodol in the diagnosis of diseases of the lungs; a paper by Jacobs and Keith on the use of diuretics in cardiac edema; a paper by Bannick on the effect of intravenous treatment in uremia. In addition to these there are clinics by Logan, Eusterman, McVicar and Weir, Plummer and Hains, Hench and Jepson, Fitts and Hartman, Willius, Allen and Brown, Johnson and Adams, O'Leary and many others.

Human Pathology, a textbook by Howard T. Karsner, M. D., Professor of Pathology, School of Medicine, Western Reserve University, Cleveland, Ohio. Published by J. P. Lippincott Co., Phila.

The subject of pathology is a rapidly enlarging one and new texts are frequently required to keep us up to date. The author has covered all that is most essential in a work of this kind—general pathology, morbid anatomy, pathological histology, pathologic physiology and in a general way the subjects of bacteriology and immunology. He has given large lists of references where many of the matters discussed may be found in greater detail if desired. The work is comprehensive and authorative.

Pneumoconiosis (Silicosis) a roentgenological study with notes on pathology by Henry K. Pancoast, M. D. Published by Paul B. Hoeber Inc., New York City. Price $4.00.

The author began a roentgenological study of dust deposits in the lungs many years ago, and this was supplemented by a very thorough investigation of the pathology, which was necessary for the correct interpretation of the roentgenograms. The studies covered some thousand of cases of various forms of silicosis. In addition to the roentgenological studies a chapter is given to the description of dusts and another to preventive measures.

Doc: Facts, Fables and Foibles by John A. Dillon, M.D. Published by Richard G. Badger, Boston. Price $2.00.

This is a collection of short stories, nearly all of which have appeared, at sometime in the Journal under the pseudonym "Renig Ade." Many readers of the Journal will be glad to know that these stories can now be obtained in book form so that they many while away some idle hours in their perusal. These stories do not grow old, they are full of wit and humor and pathos, and they present intimate phases of a country doctor's life in the inimitable style of the author. Every old practitioner will read in these stories many of his own experiences. They are good medicine for him who has the blues—they contain wise council for the egotist and soothing words for the disappointed and discouraged.

The Surgical Clinics of North America (Issued serially, one number every other month.) Volume VI, Number IV (Mayo Clinic Number—October, 1926.) 274 pages with 91 illustrations. Per Clinic year (February 1926 to December 1926.) Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

The Mayo Clinic number will be found of more than usual interest to most of our readers. Many of the contributors being well known to them. Wm. J. Mayo and Arthur C. Johnson present a case of ectopic kidney presenting as a pelvic tumor. Recurring epistaxis from chronic hemorrhagic purpura; Meckel's Diverticulum. Charles H. Mayo and Lester D. Powell discuss the colon as a urinary receptable and present some cases. Judd, Parker and Morse present cases of tumor of the kidney and ureter and tuberculosis of the kidney. Hunt shows a hydronephrosis and a diverticulum of the urinary bladder. There are clinics by Walters, Thompson, Balfour, Harrington, Synhorst, McIndoe, Higgins and Mann, Ballman, Sheard, Sistrunk, Pemberton, Henderson, Myerding, Williamson, Mason, New, Decker, Figi, Lillie, Stark, Craig, Desjardins, and Lundy.

The Practice of Medicine. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Second Edition, entirely reset. Octavo of 1174 pages. Philadelphia and London: W. B. Saunders Company, 1926. Cloth, $7.50 net.

The second edition of Stevens' Practice has been largely rewritten. Some matter

has been deleted and many new subjects added. Among these are: Primary meningococcic bacteriemia, tularemia, etiology of scarlet fever, Dick test, coccidioidal granuloma, lipodystrophy, agranulocytic angina, uveoparotid fever, occlusion of the coronary arteries, melanuria, Epstein's nephrosis, sickle cell anemia, Ayerza's disease, chronic sclerosing osteitis, acrodynia and Horner's syndrome. The work has in every way been brought up to date.

Principles and Practice of Chemotherapy with Special Reference to the Specific and General Treatment of Syphilis. By John A. Kolmer, M.D., Dr. P. H., Professor of Pathology and Bacteriology in the Graduate School of Medicine, University of Pennsylvania. 1106 pages with 82 illustrations. Philadelphia and London: W. B. Saunders Company, 1926. Cloth, 12.00 net.

The author believes that the local disinfection of tissues by chemical agents properly belongs to the field of chemotherapy. Certainly this has become one of the most important subjects for study in the field of medicine and no one at this time appears to be so competent to guide the student through the maze of theories and facts as the author of this book. It is a most thorough and complete presentation of the subject.

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Council of Physical Therapy

PRELIMINARY REPORT OF THE COMMITTEE ON EDUCATION*

Such educational opportunities as are necessary to teach the proper practice of the various methods of physical therapy may be divided into three heads: (1) premedical school courses; (2) courses in medical schools; and (3) courses of information for the practicing physician.

PREMEDICAL COURSES

The Committee believes that courses in biologic physics should be added to the curriculums of premedical schools. This recommendation is in agreement with a similar recommendation made several years ago by a committee of the National Research Council. The Committee realizes that this will be a slow process, owing to the lack of properly qualified instructors.

While the selection of the subject matter of courses in biologic physics must always be made by the men responsible for such courses, the Council on Physical Therapy will be glad to act in an advisory capacity in laying out the broad outlines of the courses. The chairman of the Committee on Education has already received a request for such advice from a state university.

As the courses in biologic physics are concerned with the application of physical principles to biologic problems, greater emphasis should be placed on the biologic needs than on the physical side of the subject. The instructor should have, therefore, a broad knowledge of the biologic phenomena that may be attacked through physical methods. He should be primarily a trained biologist rather than a trained physicist.

Courses in physics naturally are planned and taught by physicists, who usually look on this subject as a branch of applied mathematics. They are interested in training students to make physics their life work. Great emphasis is placed on the exactness of the methods of physical investigation. It would be highly advantageous to the students and to the department if, in the regular physics courses, physical principles were more frequently illustrated by biologic material. The biologically minded student might have a different attitude toward physics if he realized that many of the fundamental principles in physics were discovered and elaborated by biologists for use in their biologic investigations, and that, as a result of these contributions, many biologists have been inscribed in the history of science as physicists.

MEDICAL COURSES

The courses in the medical school should be open to upper classmen and graduate students, and should be given by men who are familiar with physical principles, but whose primary interest is in therapeutic applications. The courses would best be given in connection with hospital clinics.

COURSES FOR PRACTITIONERS

Information for practicing physicans could be given, first, by a series of carefully prepared articles published in the current scientific magazines, and second, by encouraging the presentation of papers on physical therapeutic topics before medical societies. They should not be of the usual case-report type, nor should their content be a summary of contributions to the progress of medicine. The purpose of the papers should be a purely educational one.

*This preliminary report of the Committee on Education is to be folowed by additional reports on the medical aspects of education in physical therapy.

Missouri-Kansas Neuropsychiatric Society

The Missouri-Kansas Neuropsychiatric Society was organized at the University Club in Kansas City, Missouri, December 8, 1926. Twenty-five Neuropsychiatrists from eastern Kansas and western Missouri were present.

The program included demonstration of cases of Amaurotic Family Idiocy, by A. L. Skoog; Norcolepsy, by B. Landis Elliott; a paper with lantern demonstration of cerebral fibre tracts exposed by gross dissection, by E. J. Curran; and a talk on Psychiatry in Europe from the Internist's point of view, by Peter I. Bohan.

The following officers were elected: President, Karl Menninger, Topeka; Vice President, F. A. Carmichael, Osawatomie; Secretary, E. T. Gibson, Kansas City.

The next meeting will be held at the University Club in Kansas City, Mo., in February.

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American Association for Study of Goiter

The American Association for the Study of Goiter will hold its annual clinical meeting at Philadelphia, Pennsylvania, January 31st and February 1st and 2nd.

An unusually high class scientific propram has been secured by Dr. Emil Goetsch of Brooklyn, New York, the President, and by Dr. Kerwin Kinard of Kansas City, Missouri, the Secretary. Many of the big goiter men of the country have accepted places on the program.

The forenoons will be devoted to clinics at the University of Pennsylvania Hospital; the afternoons to the scientific sessions in the assembly room of the Bellevue-Stratford Hotel. All members of State Societies are most cordially invited.

The officers of the American Association for the Study of Goiter are: President, Dr. Emil Goetsch, Brooklyn, New York; Vice President, Dr. Gordon S. Fahrni, Winnipeg, Canada; Recording Secretary, Dr. J. D. Moschelle, Indianapolis, Indiana; Corresponding Secretary, Dr. Kerwin Kenard, Kansas City, Missouri; Treasurer, Dr. J. R. Yung, Terre Haute, Indiana.

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$100,000 Offered for Conquest of Cancer

Two prizes of $50,000 each have been offered by William Lawrence Saunders of New York for discoveries of the causation prevention and cure of cancer. The offer was made on December 15, 1926, and will stand for three years. The donor expects to renew it, if necssary.

Mr. Saunders is Chairman of the Board of Directors of the Ingersoll-Rand Company, Director of the Federal Reserve Bank of New York and President of the United Engineering Company.

The decision upon which the awards will be made is to be reached by the American Society for the Control of Cancer and approved by the American Medical Association and the American College of Surgeons.

It is Mr. Saunders' idea that discoveries are not always made by experts and that "through the lure of a reward this serious problem might be solved through the genius of a lay mind, by chemists or through unorganized medical sources.

The offer of Mr. Saunders to the American Society for the Control of Cancer has not yet been formally acted upon by the Society, and it is impossible to say at this time what rules other than those proposed by Mr. Saunders will control the decisions. Information as to how persons who wish to present their discoveries for consideration should proceed will be announced later.

Mr. Saunders made his offer known thru a letter to Dr. C. N. B. Camac of New York under date of December 13, 1926, and read by Dr. Camac at a dinner given in the interests of the American Society for the Control of Cancer by President Nicholas Murray Butler of Columbia University and Honorable Charles Evans Hughes.

The letter follows:

New York, December 13, 1926.

Dr. C. N. B. Camac,
76 East 56th Street,
New York.

Dear Dr. Camac:

I regret that because of a previous engagement, which I cannot well forego, I shall be unable to accept your kind invitation to be present at the dinner on the 15th inst. in the interest of the American Society for the Control of Cancer.

May I ask you to represent me on this occasion by making the following statement?

I will give Fifty Thousand Dollars ($50,000.) to any person or group of persons who may discover what human cancer is and how it can positively be prevented.

I will give Fifty Thousand Dollars ($50.000.) to any person or group of persons who may discover an absolute cure for human cancer.

The entire sum; that is, One Hundred Thousand Dollars ($100,000.) may be given to the same person or group of persons.

The decision upon which these awards

shall be made is to be determined by the American Society for the Control of Cancer and approved by the American Medical Association and the American College of Surgeons.

This proposition shall expire at the end of three (3) years from the date of this letter, unless it is further extended by me. This I hope and expect to do.

What I have in mind is this: Discoveries are not always made by experts. Physicians, like business men, are not always the best reseach workers. Through the lure of a reward this serious problem might be solved through the genius of a lay mind, by chemists or through unknown and unorganized medical sources.

Yellow fever, for instance, has been destroyed through the research work of three obscure Army surgeons—Reed, Lazier and Carroll. As far as I know, no cure for yellow fever has been found, nor is a cure necessary so long as we now know how to control and prevent the disease.

This letter gives only the outline of this proposition, the details of which might be drawn up by the American Society for the Control of Cancer, or by such other persons as they may select.

Very truly yours,
(signed) William Lawrence Saunders.

The Work of the United States Public Health Service as Reviewed in the Annual Report of the Surgeon General

The annual report of the Surgeon General of the United States Public Health Service for the fiscal year ended June 30, 1926, has been transmitted to Congress by the Secretary of the Treasury. The report gives the record of the one hundred and twenty-eighth year of the existence of the Service.

The Surgeon General says that increases in the facilities for the transportation of human beings and of commodities multiplies opportunities for the introduction of communicable diseases from one State or community into another and from foreign countries into the United States. Increases in population produce marked tendencies to more than corresponding increases in sickness and death, and such increases will surely follow unless the means of preventing them are placed at the disposal of our public health agencies and unless the people themselves will co-operate with their health authorities.

An earthquake in Japan arouses our sympathy, but it does not endanger our safety; but smallpox in England, cholera in Siam, plague in Egypt, or trachoma in Russia may be conveyed to our shores and introduced among our people in a very short time. A widespread epidemic of diphtheria in Canada will probably cause cases of this disease in the United States. In spite of all practicable precautions, typhus fever cases from Mexico are occasionally found in the Southwest.

The responsibilities of health officers—Federal, State, and local—are increasing, but our knowledge of disease and the methods by which it can be prevented are also increasing. We now know the methods by which many of the more important communicable diseases are transmitted, and this knowledge enables the health officer to take action to prevent the introduction or spread of these diseases. Some diseases—smallpox and diphtheria, for instance—could be practically eliminated if the public could be made to realize the advantages of using well-known methods of prevention. Thousands of persons in the United States suffer and die each year because of lack of available information which prevents the use of methods of prevention, the efficacy and safety of which have been proved. Even when the results are reckoned only in dollars, properly directed health work pays large dividends to the community.

In making studies of child health, the Public Health Service has followed the same group of children through several years, making possible an estimate of the effects produced by such factors as underweight, visual, dental, tonsillar, and other physical defects upon the health, progress, and welfare of the children, and also showing the effects in later years of the correction of these defects. This unique study is now beginning to bear fruit as the analysis of various groups of data and their preparation for publication progresses.

The regulation of interstate traffic in biologic products, while a routine and continued activity of the Service, was not without features of public interest. Largely during the past year it has been possible to standardize products used in the prophylaxis and treatment of scarlet fever to an extent warranting their application through commercial manufacture. The earlier results indicate a decided benefit from the use of the antitoxic serum in treatment, but more limited usefulness for the immunizing injections. During the year the standardization of anti-dysenteric serum was completed and a potency unit suggested for comparative purposes, in the testing of com-

mercial antidysenteric serums. This testing of all serums is done at the Service Hygienic Laboratory.

Considerable progress has been made in the studies of the various aspects of industrial hygiene and sanitation. The problem of the dangers to health possibly inherent in the use of tetraethyl lead gasoline has received during the year, virtual solution. By an intensive devotion of personnel to various phases of the problem, sufficient dependable data were secured to indicate that under certain practicable conditions of production, handling, and use, this substance would not present any considerable health hazard. Practicable suggestions for these processes were drawn up, submitted to health organizations as a basis for regulation, and adopted in good faith by the manufacturing and handling interests.

A new departure on the part of the Public Health Service in the control of malaria was the employment of airplanes for the distribution of arsenical dust for the destruction of mosquitoes. These experiments give promise of success in adapted areas, and data are being collected as to precise methods and costs.

The field studies of goitre, a disease distressingly prevalent in some parts of the country, have been continued, with the result of stimulating the interest of health officials, furnishing them with precise methods of survey, and making available the best information of the time regarding control.

One hundred cities have adopted the tentative standard milk ordinance developed by the Public Health Service. In actual operation this ordinance has proved to be capable of enforcement, has measurably improved the sanitary quality of the milk, and at the same time the amount of milk used has increased.

Campaigns for the eradication of bubonic plague in rodents were successfully completed at New Orleans, Louisiana, and at Oakland, Cailifornia, as was the campaign against human and rodent plague at Los Angeles, California.

The Surgeon General states that 84 per cent of our rural population is as yet unprovided with adequate official local health service, the lack of which causes loss of human life and earnings estimated at approximately one billion dollars each year. During the past year work to establish full-time County Health Service was carried out in 89 counties in 20 States.

Measures for safeguarding shellfish from pollution and contamination, conducted in co-operation with the Bureau of Chemistry and the Bureau of Fisheries, resulted in great improvement in the methods used by the producing States and in renewed confidence in the safety of shellfish in the consuming States. Reasonably uniform rules, regulations, and methods of enforcement are being developed which will result in better observance as well as better enforcement.

Measures for insuring safe drinking water supplies on interstate carriers, both trains and vessels, are meeting with better results each year due to the increasing appreciation of the value of this work on the part of the companies concerned. The railroads have practically completed the installation of the new type of water coolers for passenger cars which completely separate the ice and the drinking water.

Assistance was rendered the National Park Service in the designing and installation of sanitary equipment in the national parks and in maintaining proper sanitary conditions in the numerous camps, hotels, dining rooms, and kitchens. The vast and increasing number of sightseers and tourists who come to the national parks from every part of the United States and journey thence to many places makes sanitation imperative as a measure for the prevention of the interstate spread of disease.

There was no importation of plague, cholera, yellow fever, or other major quarantinable disease during the year. This freedom from such importation has been accomplished with a minimum delay and expense to shipping and the traveling public, although the health conditions throughout the world have been threatening. Recognizing that the prevention of the importation of epidemic diseases is based upon epidemiology, which is constantly advancing, action has been taken to improve quarantine methods, making them more efficient, more precise, and less burdensome to commerce. The need of constant vigilance at our ports was shown when a Japanese steamer arrived at New Orleans with two cases of plague on board among the crew. The vessel was fumigated and 422 rats were killed. Of these 23 were infected with bubonic plague.

The inspection at European ports of emigrants intending to come to the United States, which was begun during the fiscal year, is apparently an unqualified success. It is, however, a severe drain upon the medical personnel of the Public Health Service, both on account of the number of officers needed and the special training required.

At present there are 28 Regular Medical Officers of the Service on duty in Europe in the following countries: England, 4; Ireland, 5; Germany, 8; Scotland, Norway and Sweden, in each, 2; and one each in Poland, France, Holland, Belgium, and Denmark. Immigration inspection is still continued at American ports, as all foreign seamen must be examined as prospective immigrants. There were 872,842 foreign seamen so examined last year.

In general, the report of the Surgeon General shows favorable health conditions throughout the United States. Preliminary reports indicate a low death rate for the calendar year 1925 (11.7 per thousand population in 30 States). A widespread outbreak of respiratory diseases early in the year 1926 was largely responsible for high death rates for the country as a whole during the first four months of the year.

During the calendar year 1925, 36 States reported 81,816 cases of diphtheria, which is 17 per cent less than the number in 1924. More than 85 per cent of the persons who die from diphtheria are children less than 10 years old. Use of diphtheria antitoxin promptly on the development of the early symptoms of the disease would have saved most of these lives, and the general use of proved methods of ascertaining whether an individual is susceptible to the disease and immunizing those who need protection would reduce the morbidity and mortality caused by diphtheria to a small fraction of the present figures. The mortality from this disease has been reduced more than 70 per cent in the last 25 years, but a still greater reduction is possible.

Thirty-four States reported 113,762 deaths from influenza and pneumonia during 1925, which may be compared with 105,-109 deaths during 1924.

Thirty-six States reported 212,000 cases of measles during 1925, and 424,000 during 1924.

During 1925, 36 States, having a population of 93,650,000, reported 26,700 cases of smallpox and 595 deaths; 39,500 cases and 813 deaths in 1924. Most of the deaths from this disease occurred in a few cities where the virulent type of the disease appeared. Differences in the fatality rates of this disease are shown in the reports from the following cities: Los Angeles, 1,278 cases and 33 deaths; Oakland, 498 cases, no death; Washington, D. C., 59 cases and 20 deaths; Indianapolis, Ind., 545 cases, no death; Minneapolis, Minn., 416 cases and 144 deaths; Omaha, Nebr., 559 cases, no death. Contrasts similar to these are frequent in the history of smallpox in recent years. For years cases of mild smallpox may be reported in a city with a very few deaths. Then without warning, virulent cases appear and many lives are sacrificed before belated vaccination checks the disease. Too frequently the vaccination is limited to persons living in certain sections of the city, and later the disease breaks out again.

The death rate from tuberculosis in 36 States in 1925 was 81.8 per hundred thousand population. In 1924 in the same States the rate was 84.8. This reduction is a continuation of the general trend of this disease for at least a quarter of a century. If the tuberculosis death rate of 1900 (201.9 per hundred thousand) had prevailed in these 36 States during 1925, there would have been 189,000 deaths from this disease, instead of 76,605 deaths, indicating a saving of more than 112,000 lives.

Typhoid fever showed some reaction during 1925 from the improvement which has been noted for several decades. Thirty-five States reported 36,000 cases of typhoid fever during 1925 and 27,000 cases during 1924. The increase was most marked in the rural population and small cities. The cities having 100,000 population or more showed a very slight aggregate increase over 1924. These large cities usually have better control over food, water, and milk supplies and better sewerage systems than the smaller places.

The Public Health Service provided hospital care and other medical services in different parts of the United States, Alaska, and the insular possessions for the treatment of merchant seamen and other beneficiaries of the Service. A total of 1,321,309 hospital patient days, 572,139 out-patient treatments, and 91,553 physical examinations were furnished. The number of lepers segregated at the National Leper Home at Carville, La., increased to 259. The Marine Hospital on Ellis Island continued to admit all sick and detained immigrants whose treatment was requested by the Department of Labor, including an increasing number of alien seamen with venereal and other contagious diseases.

The program of venereal disease control which has been built up in the eight years since the creation of the Division of Venereal Diseases has been found, on the whole, satisfactory. This Division co-operates with State Boards of Health for the prevention and control of venereal diseases and for the study and investigation of conditions influencing the spread of these diseases. Throughout the country there has

been built up a unified method of prevention and control. The work done at 416 Venereal Disease Clinics, operated by local authorities, was reported regularly to the Service. At these clinics scientific treatment is given to indigent patients without cost or for a nominal fee. Educational pamphlets, motion-picture films, stereopticon slides, and exhibits have been made available through each of the State boards of Health. Standard laws and ordinances have been enacted throughout the country tending to unify the program of control. A review of the field to be covered and the work that has been done indicates an outstanding achievement in modern public health effort.

A very important part of the work of the Public Health Service is done in co-operation with other agencies, International, Federal, State, and local. Many of the departments of the Federal Government secure the services of trained medical workers and medical and sanitary advisers through the Service. Information regarding the prevalence of preventable diseases is furnished to the Health Section of the League of Nations, and the League's information of the world prevalence of preventable diseases is made available to the Service. The State Health Officers may call upon the Public Health Service for advice or assistance, and it co-operates in many ways with health officers throughout the country.

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Elimination of Sub-standard Drugs Object of New Survey by Bureau of Chemistry

To see that potent pharmaceuticals comply with the standard of strength indicated by their labels, the Bureau of Chemistry has begun a resurvey of all the more important preparations according to a recent statement by the officials of that bureau charged with the enforcement of the Federal food and drugs act.

The text of the statement follows:

"For the past two or three years the Bureau of Chemistry has been devoting special attention to the more important pharmaceutical preparations, particularly hypodermic tablets and potent galenicals, on the American market. In this investigation the pharmaceutical manufacturers have cooperated actively through 'contact committees' appointed by their associations. These committees have devoted intensive study to the methods of analysis for some of the most important pharmaceuticals, particularly medicinal tablets, and have specified what they regard as allowable tolerance for some of them. Two reports submitted by the committees have been made available to the industry as a whole.

"There have been examined by the Bureau of Chemistry samples of a representative number of the products of practically all American manufacturers of drugs of the type under investigation. The results of this investigation have shown that, while the large majority of these products are reliable and true to label, a not negligible proportion has been at material variance from their professed standards. In a number of instances where the quality of the product has departed excessively from the expressed standards, prosecution of the manufacturers was instituted. There has been no indication of any intent on the part of any manufacturer of pharmaceutical products deliberately to adulterate his preparations. The deviations found have all been due, it is believed, to lack of adequate supervision and control.

ACCURACY IN POTENT MEDICINES ESSENTIAL

"The officials of the Bureau of Chemistry believe, and their opinion is shared by the responsible manufacturers, that in the case of medicines depended upon in emergencies and in the tratment of serious diseases no efforts should be spared to guarantee the accuracy of the dosage employed. It is usually impracticable for the physician to determine for himself whether or not a drug is of standard strength, quality, or purity. He must depend upon the manufacturer to furnish his medical supplies correctly made.

"Not only are the patient and the physician protected by a strict enforcement of the food and drugs act, but the conscientious manufacturer also is protected against the competitor who perhaps fails to exercise proper care in the manufacture and control of his preparations. This work, therefore, has had the hearty support of the pharmaceutical manufacturing industry as a whole, and no little of the accomplishments of the past few years is attributable to this moral support and active co-operation.

WIDER RANGE OF PRODUCTS IN RESURVEY

"The Bureau of Chemistry is now preparing to resurvey the entire field of pharmaceutical preparations. It is the intention to include a wider range of products than was investigated in the first survey. In addition to hypodermic tablets and galenical preparations, there will be examined drugs in the form of compressed tablets, tablet

triturates, capsules, ampoules, and others. As a result of the previous survey and regulatory action brought in connection therewith, and as a result of the splendid co-operation from the manufacturers in studying intensively many of the problems involved and adopting more effective methods of control, it is believed that variations from declared standards throughout the entire field of pharmaceuticals will be much less than were found during the first survey. However, it is the intention, because of the general warning to the trade through the developments in the first survey, which impressed upon manufacturers the necessity for revision of their manufacturing and control methods wherever inadequate, to bring legal action during the coming survey on variations from standards whenever these are wider than warranted under adequate supervision. It is possible, therefore, that action may be taken in some cases which would have been passed over with a warning during the former survey.

"The ultimate purpose of this work is to eliminate substandard drugs from the American market with as little confusion as possible, so that physicians can rely upon the accuracy of the remedial agents which they prescribe or dispense.

"To this end the continued co-operation of the industry is invited. There can be no doubt of the possibility of mutual helpfulness, and indeed, of general benefit, from an exchange of information and the results of research on such subjects as the supervision and control of the manufacture of potent drugs."

MEAT PROTEINS ENHANCE FOOD VALUE OF CEREALS

Research conducted by the Bureau of Animal Industry, United States Department of Agriculture, shows the high supplemental value of meat in connection with vegetable proteins.

Feeding experiments with albino rats showed that the protein of beef enhances to a remarkable degree the nutritive value of protein in wheat, bolted wheat flour, corn meal, oatmeal, and rice. When each of the products named was the sole source of protein in the diet, beef was found to be much more efficient for promoting growth than an equivalent amount of protein in the form of wheat,. wheat flour, oatmeal, or navy beans. But when combinations of equal parts of beef and vegetable protein—or even one part of beef and two parts of vegetable protein—were fed, the mixtures were practically as efficient for promoting growth as when beef protein alone was used, except in the case of navy beans and potatoes.

Briefly, the experiments show the high nutritive value of food combinations, including meat proteins. The progress of research concerning the food value, flavor, and palatability of meat receives special mention in the annual report of the Chief of the Bureau of Animal Industry, just published.

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Practical Treatment of Duodenal Ulcer

Out of 100 patients seen at the Mayo Clinic with probable duodenal ulcer, only eleven had had a Sippy treatment lasting three weeks or more; nine more had been put to bed for short intervals, and another nine had been given frequent feedings. Altogether, fifty-two had had some change made in their diet, and forty-eight had been practically untreated. They had suffered for an average of ten years, and had seen an average of four physicians. The diagnosis had been made in thirty-three cases and suspected in twenty-nine more. Walter C. Alvarez, Rochester, Minn. (Journal A. M. A., Dec. 18, 1926), asserts that the failure to recognize the disease can be ascribed mainly to the fact that the clinical picture of duodenal ulcer has only recently become clear—so recently that the descriptions in textbooks are still inadequate. The failure to treat it intelligently is also due to the deficiencies of the textbooks, which describe only one type of management and that, one which is not practical for most patients. The essential feature of the treatment outlined by Alvarez is the taking of food between meals. That, unaided, will, he says, bring comfort to many patients with uncomplicated duodenal ulcer. "In the morning a mixture should be made up which may consist of a quart of milk, two eggs and either a gill or half pint of cream, depending on the patient's need for extra calories. If milk is not well tolerated, a certain amount of thin gruel made from any cereal may be substituted. Robinson's Scotch groats or Robinson's barley flour is very suitable. The patient takes a bottle of this mixture to work with him and drinks a glassful, about 6 ounces, at 10 a. m., and 2, 4, 8 and 10 p. m. He should have another glassful by his bed in case he should wake during the night. There does not seem to be any theoretical or practical reason for icing it. He takes his breakfast at 7:30 a. m., lunch at 12 m., and dinner at 6 p. m. If he should be traveling or if he should

forget to take his bottle with him, he can get a milk-shake or malted milk at a soda fountain. He may also carry around with him a box of crackers of some kind. In some cases the pain will recur within an hour and a half, and the food must then be taken every hour and a quarter. In Alvarez' experience, however, cases as severe as this do not do well on medical treatment. In practically all uncomplicated cases the patient gets immediate relief from his distress and begins to gain in weight and strength. He is asked to rest as much as possible on Saturdays and Sundays, and he is forbidden to do any lifting or gardening. He must give up his "daily dozen" and he probably had better give up his golf. Walking is about the only exercise that is allowable. Alvarez thinks it wise for these patients to take food at 9 or 10 a. m. and at 3 or 4 p. m. for months and years after they are apparently cured. Many have relief from pain and indigestion just so long as they persist in being careful.

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Effect of Diet Low in Calcium on Fertility, Pregnancy and Lactation in Rat

Donald Macomber, Boston (Journal A. M. A., Jan. 1, 1927), used two series of rats. Twenty-eight animals were placed on diet A, the control diet, and one containing an adequate amount of calcium. Thirty-five were placed on diet B, which was precisely identical with A in every respect except that it contained only a minute trace of calcium as far as the diet itself was concerned. The results were as follows: Diets low in calcium do not produce sterility in the adult rat but they do affect the fertility by increasing the intra-uterine mortality. In the rat, pregnancy makes relatively small demand on the mothers because the young are largely cartilaginous at birth. Even when the diet is very low, in calcium the fetus is normal at birth both in weight and in calcium content. To a certain extent, it acts as a parasite on the maternal organism and draws its calcium from her reserve. This is shown by analyses of the maternal calcium, by roentgenograms of the bones, and by the specific decalcification of the teeth. In the rat, all these effects are intensified by lactation. The mother rapidly loses calcium from her body to supply the needs of the growing young; but the young are now not able to get all they need and soon show signs of a lack of calcium by stunting, weakness and often death. This is to be contrasted with the fetal ability to live at the expense of the mother. The difference is probably not, however, due to a physiologically different principle, but to the much greater needs of the growing young and the increasing resistance of the maternal organism to sacrifice its reserves. That this is perhaps so is shown by the fact that low calcium causes the death of the fetus even late in pregnancy with the cow. Finally, Macomber concludes from his study in regard to the dietetic management of pregnancy and lactation, that there must be an adequate source of calcium in the diet of the pregnant and nursing woman if these functions are to be carried out normally and with a minimum of such disturbances as caries, stillbirths and failures of lactation.

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Collateral Circulation in Thrombo-Angiitis Obliterans

Roentgenograms of vessels in thromboangiitis obliterans injected with bismuth oxychloride reveal an extensive collateral circulation, and indicate that gangrene in these cases is due to the inability of the collateral circulation to keep ahead of the advancing thrombus. Dean Lewis and F. L. Reichert, Baltimore (Journal A. M. A., July 31, 1926), assert that an attempt may be made to hasten the development of a collateral circulation by division of the femoral artery just distal to the origin of the profunda femoris. Division of this artery throws out of function the principal arteries involved in the chronic inflammatory process. That thromboangitis obliterans does not interfere with the development of a collateral circulation is indicated by visualization of vessels in these cases. The early and practically complete relief from pain following division of the femoral artery, as in one case cited, suggests that spasm of the artery may be an important factor in causing pain, and that throwing out of function of the arteries principally involved in this process may be an important factor in relief of pain.

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NOTICE

Dr. H. L. Alexander, Associate Professor of Medicine, Washington University Medical School, will be the guest of the Shawnee County Medical Society on February 7.

He will talk on Hyperthyroidism, at 5:30 p. m., and on Present Conception of Allergy, at 7:45 p. m. at Pelletier's Tea Room, where dinner will be served at 6:30 p. m.

Special Courses for Physicians in Treatment of Venereal Disease

Surgeon General Hugh S. Cumming has announced that the U. S. Public Health Service, as a part of its co-operative work with State health departments in the control of venereal diseases, will give special courses of training to physicians, clinicians, and health officers at its venereal disease clinic, Hot Springs, Arkansas.

This clinic, which is operated by the Public Health Service in a new building belonging to the Department of Interior, offers exceptional opportunities for the study of the venereal diseases, especially in clinical and laboratory diagnosis, treatment methods, and clinic management. Here studies of the many practical and scientific problems connected with venereal disease control are carried on. Last year 3,570 indigent persons were examined at the clinic; 3,064 cases of syphilis and gonorrhea were diagnosed and given a total of 32,315 treatments.

Surgeon General Cumming states that the instruction courses which now are offered will consist of a series of lectures by the Director and the Consulting Specialists attached to the clinic, demonstrations in laboratory and treatment methods, and practical experience in the diagnosis and treatment of syphilis and gonorrhea in various stages through participation in the routine work of the clinic. New classes of not more than ten physicians will form on the first of each month and the course will continue for a minimum of thirty days. Engraved certificates will be presented by the Public Health Service to those who satisfactorily complete the thirty-day course.

Fees are not charged for this course of instruction. The individual physician, however, will necessarily provide his own travel expense to and from Hot Springs and his living expenses while there.

Interested physicians should write to the local State health officer or to the Surgeon General, U. S. Public Health Service, Washington, D. C., for information or application blanks. Applications should be indorsed by the State health department in which the applicant resides before being submitted to the U. S. Public Health Service.

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Treatment of Pernicious Anemia

J. L. Yates and William Thalhimer, Milwaukee (Journal A. M. A., Dec. 25, 1926), report a case of pernicious anemia in which several unusual observations were made. One hundred and thirteen transfusions were made in three years from many donors. Slightly more than 52 liters of unmodified and modified blood was given by five methods without the patient's developing unusual antagonism against any of the blood transfused. The patient required a transfusion of 500 cc. of blood every two weeks to provide sufficient internal respiration to maintain active life. Several times during his illness he refused transfusion for periods of from four to six weeks, but was compelled by his waning health to return for more blood. Each time it became more difficult to restore him, even approximately, to his previous status. He refused to follow directions as to diet, rest and general hygiene, nor would he permit the removal of his teeth. The fatal decline followed an interval of five weeks without transfusion. Despite his noncooperation, his life was apparently prolonged two or more years. Death resulted from failing metabolism, the fatigue and exhaustion of cells whose functions were essential to life, which had been injured by the restricted oxidation during periods of intense anemia, by overexertion and perhaps by intoxication. The experiences of this patient indicate that restoration of the blood volume to normal by several large transfusions, and the maintenance of a relatively normal blood volume by repeated small transfusions to offset the deficit in hematopoiesis provides opportunities for such recovery as may be obtained, and assures the utmost extension of active life. The use of preserved blood, if it proves to be safe, offers a means to provide for frequent small transfusions.

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Tolerance to Digitalis in Experimental Diphtheria

That digitalis is an effective circulatory stimulant is confirmed by the series of experiments reported on by Harry Gold, New York (Journal A. M. A., Dec. 18, 1926). A considerable rise in blood pressure when it was previously low occurred in a number of animals after varying doses of ouabain. The study shows that direct synergism between diphtheria toxin and digitalis does not exist even though the heart has been severely injured by the toxin, and that diphtheria toxin does not diminish the tolerance of an animal to digitalis unless that animal has been reduced to a state of extreme circulatory depression or collapse. There are clinical conditions in which patients become more susceptible to the digitalis bodies. It has been frequently seen that some patients with heart disease in the terminal stages

become extremely susceptible to the toxic action of digitalis. It is doubtful, however, whether the increased susceptibility to digitalis observed in nearly moribund animals has any important bearing on the clinical problem of the use of digitalis in patients with diphtheria. The experimental work does justify the expectation that in certain cases of circulatory distrubances produced by diphtheria, digitalis in the proper dosage would be of value.

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Street Risk of Carbon Monoxide Poisoning

The existence of a definite street risk of repeated or chronic slight carbon monoxide anoxemia is confirmed by the observations reported by Elizabeth D. Wilson, Irene Gates, Hubley R. Owen, Philadelphia, and Wilfred T. Dawson, Galveston, Texas (Journal A.M.A., July 31, 1926). Confirmation of such a diagnosis should be sought for by testing the blood for carbon monoxide. A quantative method should be used.

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Pituitary Extracts

Competition may be the life of trade, but it develops some bizarre contrasts. There is competition in the manufacture of pituitary extracts, and the consequence is that the size of the required dose has been, so to speak, "in the air," one brand being several times as active as another. This situation has at last been remedied by the adoption of an official standard (U. S. P. X), but questions of purity and stability remain to be solved by the manufacturers.

In passing, we may remark that the standard adopted by the U. S. P., and seconded by the Geneva conference of the League of Nations, is the same as that which has long been applied by the house of Parke, Davis & Co., whose product Pituitrin is so well known.

For further particulars in regard to Pituitrin the reader is referred to the advertisement in this issue entitled "Are All Pituitary Extracts Alike?"

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Antipressor Fraction From Liver Tissue and Its Physiologic Action

The clinical results obtained by A. A. James, N. B. Laughton and A. Bruce Macallum, London, Ont. (Journal A. M. A., July 31, 1926), with liver extracts have been gratifying. In some patients, the depression in blood pressure was very gradual, and the lowest point was reached many hours after the injection. In other cases the effect was immediate and persistent. The chemical nature of the depressor substance is unknown. However, the effects of tetraethyl-ammonium compounds on the blood pressure in dogs more nearly resembles those obtained by the use of liver extracts than do other known depressor substances.

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Treatment of Contractures at Knees

John Prentiss Lord, Omaha (Journal A. M. A., Jan. 1, 1927), depicts and describes a brace he has devised for the treatment of the contractures at the knee resulting from infantile paralysis and arthritis. This appliance has been found to be sufficiently stable to eliminate the necessity for the use of plaster, which is desirable for reasons previously given. It has the ability to force the tibia forward in an effective manner, as well as to straigten the leg. It is not so cumbersome but that it may be conveniently worn during most of the treatment; it is removable, and does not interfere with walking.

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Hypophysectomy and Replacement Therapy

The basal metabolism of totally hypophysectomized rats was found by G. L. Foster, Berkeley, Calif., and P. E. Smith, Palo Alto, Calif. (Journal A. M. A., Dec. 25, 1926), to be about 35 per cent below the average of their series of normal animals. The metabolic rate of these animals may be restored transplants or by daily injections of thyroid to normal by daily anterior pituitary homoextract, but not by daily injections of posterior lobe extract. The specific dynamic action of glycocoll is absent in hypophysectomized animals and apparently can be restored only by replacement of both anterior and posterior lobe, but not by either one alone.

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Retention of Vegatable Material in Stomach

In the case here presented by Lloyd Bryan, San Francisco (Journal A. M. A., Aug. 7, 1926), the retained matter was composed of celery fibers, prune and raisin skins, and other cellulose material which could not be identified. The mass was soft and loose and had to be removed with a spoon and by sponges on a sponge stick. The patient was a man, aged 55, a native of India. The most history was uneventful so far as concerned the present illness. Up to three years be-

fore, the patient had been very well. About that time he began to feel some abdominal distress, at first after meals and later constantly. It was characterized by a feeling of fulness and lightness, relieved somewhat by belching. There was occasional vomiting. At the same time there was a dull pain in the epigastrium and across the abdomen but not referred to the back or shoulder. The stools had always been formed and never tarry or clay colored. He had had diarrhea at times, sometimes six or eight stools in a day. He had never been jaundiced. The conclusion from the roentgenray examination was: retained foreign material in the stomach. At operation, aside from the retained vegetable material in the stomach no lesion was found. The pylorus was smooth and wide, admitting two fingersreadily. Three months after the operation the roentgenogram of the stomach was normal and there was no six hours gastric residue. This case is of particular interest on account of the fact that the patient was diabetic. The blood sugar (fasting) was 301 mg. per hundred cubic centimeters of blood.

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Influence of Tobacco and Other Extracts on the Epithelial Cell.

F. C. Helwig, M.D., Kansas City

Read at the Annual Meeting of the Kansas Medical Society at Kansas City, May 4-6, 1926.

Physicians are frequently confronted with the question "Is there anything known about the cause of cancer" and only too often it is answered by a shrug of the shoulders and the cryptic reply that little or nothing is actually known. This is a misleading answer for the road to cancer research has not ended in a blind alley and this fact is due solely to animal experimentation. Hanus first transplanted a rat tumor into another rat and Jensen carried out an exhaustive and thorough study of the subject which is attested by the fact that almost every cancer research laboratory in the world now has some of the descendents of the original Jensen strain. It was not until 1913, however, that any investigator was actually able to produce experimentally a malignant tumor. At this time Febiger found the remains of a nematode worm in a spontaneous gastric carcinoma in a rat, which gave him the idea that this nematode might possibly be of etiological significance. The parasite was discovered to be one which infested cockroaches in a certain Danish sugar factory. Thus with a source of supply he began feeding rats with the bodies of these infected cockroaches and he was able to observe in a high percentage of cases the development of the varying stages of chronic inflammation, papiloma and subsequent malignant transformation with metastasis to the lungs and in which metastases no ova or parasites were found. In 1920 Bullock and Curtis observed the development of sarcoma in the livers of rats through the mediation of the cysticercus fasciolaris, the larvae of the tenia Crassicolis of the cat. The rats were infested with the cysticercus by feeding them cat feces containing the eggs of the tape worm. Many of the infested animals developed sarcoma of the liver associated with the presence of the parasites. In a later report (1924) they presented a more complete contribution which included a series of studies of the tissues in which were shown the results of the general histological study of the cyst wall beginning with the earliest reactions about the parasite after it enters the liver, continuing through the growth of the henign cyst and culminating in the various stages to the malignant transformation of the cyst wall. The plates displayed, of which there are a large number, are unquestionably sarcomatous histologically..

Aside from these two unquestionable cases no malignant animal neoplasms have been produced experimentally through the medium of a parasite and in both of these cases the action is so obviously that of traumatic chronic irritation that they can well be classed along with the irritation forms.

In 1921 and again in 1925 Nuzum reported finding a micrococcus which he had isolated from human breast carcinoma with which he reports having produced carcinoma in the breasts of dogs. The cuts are again unquestionably malignant but when carefully analyzed we find that the percentage of "takes" which Nuzum obtained was far below that which is normally found in the breasts of old bitches which are of spontaneous origin.

Equally as interesting as the work of Nuzum is that of the now world renowned English investigators whose names were paraded before the public by the sensational and none too critical press last summer, namely Dr. Gye and Mr. Bernard. They were working with the chicken sarcoma of Peyton Rouse which he discovered about 14 years ago while working at Rockefeller Institute. He found that cell free filtrates of these so called sarcomata when filtered through a Berkfeld filter would produce rather regularly similar growths in the proper specie of fowl. Rouse being a much more conservative investigator than the Englishman did not call his substance a virus although it was found to be present in dead cells and was killed by heat and light. The following objections have been raised against the claims of the English workers. There is considerable question as to whether the Rouse sarcoma is really a true sarcoma or a granuloma. Then this

same principle has never been found in any other tumor experimental or spontaneous. About all that Gye has found is that the so-called virus does what Rouse said it would. He has also conducted some experiments which he interprets as indicating that the virus alone cannot produce the disease but requires the presence of some other agent, probably a chemical substance which is contained in the neoplasm if it is such. Mr. Bernard was apparently in charge of the bacteriological or microscopic phase of the investigation and he has shown spheroidal like forms by the well known method of photography by ultra violet rays. Mr. Bernard thinks these spheroidal forms are the infective agent but he states himself that unless considerable care is exercised these spheroids will be confused with other spheroids occurring in most organic liquids. Hence it can be seen that these gentlemen instead of having made the epoch-making discovery of the age have after all added little to what Rouse did 14 years ago and said very little about. My reason for mentioning the work of Nuzum and Gye at all was due to the fact that there has been so much said about them both among the profession and in the press. It was only shortly before the death of Ochsner, when he was making his retiring speech before the American College of Surgeons, that he extolled in sonorous phrases the work of Nuzum even to the point of saying that he was convinced that in a short time the work of John Nuzum would be recognized as being on a par with that of Koch and Jenner.

The hereditary factor in the etiology of cancer has been brought forward and discarded any number of times and perhaps the most ardent exponent of this theory at present is Miss Maude Slye, who has conducted elaborate experimental studies along this line of investigation. She seems to have proven that the inbreeding of tumor bearing animals greatly increases the incidence of tumors. This list of tumors however includes equal significance to processes which are very distantly related such as lymphosarcoma, peculiar tumors of the lung and carcinoma of the breast and stomach. Ewing's s t a t e m e n t h e r e seems rather apropos when he says "Carcinoma of the breast in three generations of women is much more suggestive evidence than a mammary carcinoma followed by a hypernephroma and this by an ovarian teratoma in a series of three generations of mice." Another criticism well worth mentioning was brought home to me by an old teacher of mine, one Edmund Mayer in Berlin, who was a most ardent Mendelinaist. He had made a most systematic and critical as well as extremely accurate analysis of Miss Slye's work with the result that he found statistical errors in the tumor mice, checks and controls, all of which peculiarly enough helped the incidence of the tumors in those mice with the hereditary taint.

Only a word about x-ray tumors. It has been known for years that the irritation brought on by x-rays exposure will produce malignant growths and the elaborate precautions now used by all roentgenologists are ample evidence of this irritant being an etiological factor.

For many years it has been recognized clinically that the workers in coal, tar, soot, analine dyes and other coal tar products developed epitheliomas in regions irritated by these products, and in 1918 Yamigawa and Itchikawa paintig the ears of rabbits with crude tar were able to produce typical metastizing epitheliomas.

The well known Kangri Cancer among Indian natives apparently caused by the carrying of a fire pot against the abdomen and thighs has been recognized for a long time which makes it strikingly significant since epitheliomata in these regions are so unusually rare. The betel nut chewed by the natives of Madras, Ceylon and the Straights Settlements which is a mixture of betel nut, tobacco and spices is thought to cause epitheliomata in the floor of the mouth, seen so commonly where this material rests against the mucous membrane.

Arsenic workers and those treated by external arsenical application at times develop skin cancer. Experimental work on mice was carried out whereby they were painted with an arsenic solution and subsequently developed typical squamous cell epithelioma.

We also know that senile warts are very commonly seen on the hands and arms of farm laborers who work frequently in manure.

From the foregoing we see that typical epitheliomata have been produced experimentally by coal tar and its products, arsenic and as will be shown later by soot. It seems incredible that the literature is so barren of any experimental data regarding the use of tobacco or its extracts. It has been known for a century that there was an intimate relationship between carcinoma of the tongue, pipe smokers lip and the use of tobacco. The high incidence of faucial

and laryngeal carcitosis in men smokers as compared to its marked infrequency in women, as well as epithelioma of the lip in men as compared to that in women has always been strongly suggestive. After an exhaustive search of the literature no actual experimental data was found regarding the production of epithelioma by the use of tobacco or its extracts.

These foregoing statements will serve as a very brief introduction to the work which we have been carrying out in the Pathological Laboratory at the University of Kansas. It has been utterly impossible to cover the whole field or even attempt to cover it. I have purposely not gone into the subject of tissue cultures and the observations made by Carrel and Burrows and I have likewise made no mention of the extensive and brilliant work which has been done along the lines of immunity, the role of the leukocytes, chemotherapy or any other type of therapy as this is altogether too large a contract to be undertaken in any such discussion. An attempt has been made to show that irritation is probably the greatest single factor now proven and that the hypothesis of Rudolph Virchow still holds good.

With all the foregoing facts in mind I started about a year ago in an attempt to induce epithelial proliferation by the use of tobacco. Since I have never had any experience with experimental irritation tumors it seemed at first better to duplicate the work of Kennaway and Passey who had produced typical squamous cell "chimney sweeps cancer" in mice by the use of a soot extract. It seemed that by such a preliminary step I would not only familiarize myself with the technique as to proper dosage, preparation of material and recognition of early stages and changes but since it was my intention to work with charred and burned tobacco and sooty scrapings from pipes the most nearly analogous proven work was that of these two English investigators on soot. Another point of interest and at the same time of suggestive import, is the fact that blowing tobacco smoke through a white handkerchief produces a brown stain of wood tar (once called nicotine by our uplift brethren) which is comparable to the proven cases of skin cancer seen in pine tar workers.

The experiments were started the latter part of May 1925. Soot was scraped from the chimney of the old school building (the coal burned comes from Lansing, Kansas,) and the active fraction was made by ether extraction of the soot which later had been rendered basic with CaO, plated out, dried and then mixed with ether and extracted. White mice of a very low spontaneous carcinoma incidence were painted on the skin between the ears twice a week for a period of about a month, this however did not seem sufficiently irritating to keep the hair from regrowing hence we deviated from the Englishmen's technique and painted them every day. At the end of three months from the beginning of the experiment 5 of the 15 mice started had developed warts and 4 had died of intercurrent infection without trace of either warts or other evidences of tumor. In the following month of these eleven, 8 died leaving three with warts one of which subsequently died with a wart not going on to malignancy. The other two warts grew very rapidly during the ensuing month and at the end of this time both were very large, ulcerating fungating masses. A biopsy from one revealed a typical squamous cell epithelioma. Following biopsy this animal died and there were no metastases. The other animal lived for a month longer and died with an enormous ulcerating cauliflower fungiform mass covering the entire top of his head and shoulders which tumor was typically malignant.

With such gratifying results obtained from the soot painted mice a tobacco extract was prepared by scraping charred and burned tobacco, sooty cake and oily residue from the bottoms of the bowls of briar pipes. This material after the method of Kennaway was rendered basic with CaO dried on glass and extracted with ether. The filtrate was evaporated down and it left a dark brown very pungent oily mixture smelling strongly of nicotine and quite irritating to the mucous membranes of the lip and tongue when applied in even very dilute amounts. A large number of mice were chosen and the paintings begun. This first experiment resulted very disastrously as many of the mice promptly died of nicotine poisoning at the first painting and others died during subsequent applications.

It was then considered advisable to weaken the etherial extract but even then an occasional mouse would show the characteristic reaction and die in spasmodic convulsions. After these unfavorable results we endeavored to extract the nicotine. It was first separated by the older methods of alkalodial extraction but this left us very little residue and pipe scrapings are quite difficult to obtain. The medical students were all solicited and the pipe smokers

among them contributed liberally as did all personal friends and acquaintances but even then the supply was limited. This weak extract produced at first a slight proliferation but eventually the hair grew back and the extract did not seem potent.

Through communication with Dr. Nicholas Leich of Chicago and Dr. F. B. Dains of the Department of Organic Chemistry at the University I was led to try another method of extraction, namely shaking with dilute hydrochloric acid and then separating the etherial extract from the dilute acid in a separating funnel. This has been carried out now for about six weeks and suggestive results are apparently being obtained.

Last September we took a portion of the early nicotine containing extract and injected it into the ears of rabbits in an olive oil suspension producing excellent proliferations which receded when only one injection was made. As can be seen in some of the slides I am going to show there is a beautiful epithelial undergrowth. One of these was left in for four months and there was still a large keratinized area surrounded by flattened epithelium.

With our new extract which is much stronger we have had even more striking results producing suggestive appearing lesions in two weeks although I am convinced that they too would have receded if only one injection were made. Since the mouse has a much shorter span of life the general consensus of opinion is that they will produce epitheliomata more quickly than animals of a longer period of existence.

If it is possible to produce even one typical epithelioma which will continue to grow when once started on the road to malignancy without subsequent applications then the higher animal will be used.

LANTERN SLIDES

Slide No. 1. Shows back of mouse's head with early wart about 2½ months old. Soot.

2. Shows marked hpyerkeratinization but no invasion—hi power—top of wart before malignancy has set in.

3. Shows base of wart—hypertrophy of papillae mononuclear infiltration but no invasion. Early wart.

4. Shows mouse with full blown malignant proliferation massive fungating squamous cell epithelioma of head.

5. Shows low power of malignancy at biopsy.

6. Shows malignancy edge of lesion invasion below basal layer, pearls, etc. 4½ months.

7. Hi power edge of lesion 4 months. All signs of malignancy.

8. Hi power through central portion of tumor showing atypical whorls of atypical prickle cells and mitotic figures.

9. Tobacco injected ear of rabbit 2 weeks after injection showing two ulcerating lesions.

10. Hyperplasia epithelium no malignancy back of a mouse after 1 month.

11. Injection in ear of rabbit after 3 weeks shows invasion keratinized inclusions and undergrowth with atypical prickle cells.

12. After 4 months. Ear of rabbit some pearls recession but large inclusion.

13. Shows mouses ear new extract after 3 weeks only. Early wart.

14. Rabbits ear after 2 weeks two injections marked epithelial undergrowth—invasions of cartilage.

Meckel's Diverticulum

Marvin Hall, M.D., Topeka, Kansas

Read at the Annual Meeting of the Kansas Medical Society at Kansas City, May 4-6, 1926.

A Meckel's diverticulum is an out-pouching of the small intestine having a lumen which connects with the bowel. They are all non-neoplastic, are never multiple and are designated as true diverticula because they are congenital. Their size varies from one-half to nine or ten inches in length and they are about three-fourts of an inch wide at their base. The free end may lay loose in the abdomen or it may be attached to the unbilicus or to some viscus. Their walls are composed of all the intestinal coats and they may be distended with feces, gas or mucus. Before going further, and in order to get a clearer understanding of our subject, it will be necessary to briefly review the early development of the embryo: During the first month of fetal life before there is a definite blood supply established between mother and child, the embryo receives its nourishment from a small attached receptacle, the yolk or vitelline sac. This is connected to the primitive intestinal tract by the vitelline duct, through which the store of food destined for the nutrition of the embryo is transmitted. As the placenta is formed, and at the same time the umbilical cord, the yolk sac becomes incorporated with the former while the yolk stalk becomes reduced to a strand of cells which traverses the entire length of the umbilical cord. In a percent of cases that portion of the yolk stalk between the intestines and the umbilicus retains its lumen, fails to degenerate before the intestinal tube is reached, leaving a projection attached to the lower ileum. This fetal remnant is Mecke's diverticulum. Remains of the obliterated blood vessels which once accompanied it may form a cord like attachment between its tip and the abdominal wall, especially the umbilicus.

Statistical information gathered from several sources shows the widest variation in the number of instances wherein Meck-

el's diverticula were found as compared to the total number of cases examined. From the figures taken from the records of the Dresden City Hospital[1], it was established that out of 8,133 autopsies performed, only 8 cases of Meckel's diverticula were found, —a ratio of approximately one to one thousand. Twenty six hundred post mortems in the Johns Hopkins Hospital[1] revealed 15 cases of Meckel's diverticula,—one out of each 173. Records of the Boston City Hospital[1] and Bender Hygienic Laboratory[1] disclose, respectively, 11 Meckel's diverticula out of 1,382 and 5 out of 953. Balfour[2] reports 15 cases of Meckel's diverticula in 10,000 subjects examined.

From the foregoing figures, we cannot assume to make any arbitrary deductions as to the prevalence of Meckel's diverticula. Our own investigation give added evidence to the fact that there is no definite conclusion to be reached as respects the number of Meckel's diverticula to be found in a given number of subjects. Of 690 abdomens opened, we examined the small intestine of 357. Of that number 10 were shown to have Meckel's diverticula—or a ratio of one Meckel's diverticulum in each 35 examinations—a figure widely at variance with others hereinbefore cited. Of the ten Meckel's diverticula encountered in our own practice, five were causing no symptoms, eight of the ten were found during the operation and the remaining two at autopsy.

Cases of Meckel's diverticulitis are seldom diagnosed as such due first to the relatively small number of cases encountered and secondly to the close resemblance of the symptoms to those associated with perforation, appendicitis or intestinal obstruction.

The usual symptoms of Meckel's diverticulitis are of a sudden onset, and alarming from the start; tympanites is marked, pain sharp, abdominal walls tense and unless quickly relieved, complete intestinal obstruction, fecal vomiting and collapse occur.

The chief secondary pathological changes are: (1st) Infection of the general peritoneal cavity and thinning of the sac walls, but without perforation, (2nd) acute diverticulitis, (3rd) formation of adhesions with other viscera (4th) perforation with acute general peritonitis, (5th) production of intestinal obstruction by invagination or through adhesions with other viscera or the umbilicus.

Elsewhere in this paper, I have described a typical text-book picture of the usual symptoms of Meckel's diverticulitis. While these symptoms are present in the great majority of cases, there are instances of deviation from the usual.

Here reference will be made to a case in point: The patient, a lad of sixteen, was first seen in January, 1924. His family history was negative. He had the usual childhood diseases, all of which were uncomplicated. From his parents we learned that almost from infancy he had been suffering from mal-nutrition. During our conversation with his father, a physician, we learned that as a baby the patient had very frequent attacks of colic. Since then he had experienced a great deal of bowel trouble, and was forced to resort to the use of cathartics. His father told us that if the boy ate often and in small amounts, he had no trouble, but that the eating of a hearty meal would produce pain within a few hours. This pain was usually relieved by taking castor oil. On the day before we first saw the patient, he had eaten a hearty meal which had caused him some distress and he had taken a dose of salts since his bowels had not moved for four days. Shortly thereafter, he had developed considerable pain in the epigastrium, became nauseated and vomited. Subsequently he vomited several times and was brought to the hospital the following morning. He was given a high soaps suds enema and expelled a very large bowel movement. His symptoms were immediately relieved. His abdomen was not opened at this time due to the fact that his urine contained so much albumen and so many casts. We did not see the patient again until the following June. He said that in the interval he had experienced two milder attacks of a similar nature.

At this time his abdomen was opened through a right rectus incision. About twenty-four inches from the cecum was found a large Meckel's diverticulum. At this point there was a band of adhesions which was constricting the caliber of the small intestine to half its normal size. Proximal to this point, for about four inches, the small intestine was dilated to approximately four times its normal diameter. The Meckel's diverticulum together with the dilated intestine were resected and a lateral anastomosis was done. Recovery was uneventful and the father reports the patient has gained thirty-five pounds since the operation.

At this point we may properly lay emphasis on the advisibility of routine examination of the small intestine, especially where the expected pathology is not found.

Too often do we see a diagnosis of an appendicitis made, the abdomen opened through a two inch incision, the appendix removed whether normal or diseased and the incision promptly closed without further exploration.

Let us now consider a case which illustrates this point, and in which we are able to observe another genuine text-book picture. This patient, a woman of twenty-nine years, came into the hospital November 30, 1924. Her family history was negative. She had had the usual childhood maladies, without complication. In 1920, she developed what was diagnosed as an acute appendicitis.

At this time her appendix was removed through a small McBurney incision. She was relieved a short time when her symptoms returned. Her trouble was then diagnosed as duodenal ulcer and she had been on ulcer treatment since then. Two days before we first saw her, she was taken acutely ill, beginning with a generalized pain which came on in paroxysms and which was growing gradually more severe until the pain was almost unbearable. She vomited everything taken by the mouth, but there was no fecal vomiting. Several enemas failed to produce a bowel movement. A diagnosis of intestinal obstruction was made and she was immediately taken to the operating room. Under a spinal anesthesia, the abdomen was opened through a right rectus incision. A small amount of pus escaped in the region of the cecum, which was edematous and thickened from the adherence to it of the distal end of an acutely inflamed Meckel's diverticulum. The diverticulum was removed and end of an acutely inflamed Meckel' diverti- the stump inverted. Recovery was uneventful.

Although it is usually deemed inadvisable, especially in the presence of pus or where time is a factor, to examine the small intestine, we should not always content ourselves with the belief that the presence of an inflamed appendix reveals the situation completely. This fact was brought to us very forcibly by the finding of two Meckel's diverticula at autopsy.

In both these instances, the ordinary symptoms of an acute appendicitis were in evidence. An early diagnosis of appendicitis was made, and at operation each appendix was obviously the cause of the symptoms. The inference would naturally be drawn that there was no need for further concern, and the abdomen was closed under the assumption that recovery would soon result. Post mortems in each case disclosed an acutely inflamed Meckel's diverticulum.

Treatment: Is surgical since there is no way of destroying the sac except by operation. The small diverticula may be buried. The larger are ligated, excised and the stump inverted with a purse string suture, or it may sometimes be necessary to resect the involved bowel.

Certain conclusions may be drawn from the foregoing discussion, recognition of which may enable us to consider more intelligently and to deal more competently with cases involving the facts touched upon.

I feel it may properly be urged that we make an adequate incision which will enable us to make a satisfactory examination of the small intestine in all cases not involving too great difficulty or danger. By such routine examination of the small intestine, we may inadvertently discover situation which otherwise might not be brought to light, and thus be prepared to deal with them at the time of discovery, rather than to await developments which necessitates a second operation.

The desirability of routine examination of the small intestine is made increasingly apparent when we consider the statistics quoted at the forepart of this discussion. They demonstrate clearly that we may encounter only one Meckel's diverticulum in 1,000 cases, or that again we may discover Meckel's diverticula with surprising frequency.

1. Gant, Journal A.M.A., October, 1921.

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The next annual meeting of the Kansas Medical Society will be held in Hutchinson, May 3, 4 and 5.

———R———

The Fundamentals of Goiter Treatment

Robert Oleson, Surgeon

United States Public Health Service

Presented before the Sedgwick County Medical Society,. Wichita, Kansas, January 4, 1927

During the past few years commendable progress has been made in the medical and surgical care of patients with thyroid diseases. Unfortunately the success attending the efforts of a few skilled physicians has inspirel others, unqualified either by training or experience, to attempt similar feats. Consequently, the results of thyroid therapy and surgery have frequently been disappointing to the physician as well as de-

cidedly detrimental to the interests of the patient. Yet, when modern principles are invoked and intelligently applied, treatment of thyroid diseases becomes more satisfactory.

THE IMPORTANCE OF PROPHYLAXIS

It is now generally conceded that the application of efficient prophylactic measures will greatly lessen the incidence of several forms of goiter. Consequently, this vital phase of the subject should be stressed before the methods of treating goiter are considered. It is not sufficient to apply preventive measures exclusively among adolescent children. Even more important is the institution of goiter prophylaxis during that now largely neglected period peculiarly suited to the application of such remedies, pregnancy. However, until prevention achieves greater popularity and is more widely used, the treatment of thyroid disorders must continue to occupy an important share of attention from physicians and surgeons.

ANATOMY

A consideration of the anatomy and physiology of the thyroid gland is helpful in gaining a better appreciation of its abnormal manifestations. When the memory is refreshed along these lines one is better able to understand the nature of the various disturbances which occur in the gland and the reason for the distinctive symptoms. Moreover, in order properly to cope with the various abnormal thyroid conditions it becomes necessary to familiarize oneself with the gross and microscopic anatomy of the thyroid gland. The relations of the gland to surrounding structures should likewise be reviewed, thereby enabling a differentiation of abnormalities arising in the same vicinity. The variations in the location of the thyroid must also be known for the position of the gland is not constant.

FUNCTION OF THE THYROID

No physician can institute intelligent treatment of thyroid disorders unless he is conversant with the physiology of the gland. The thyroid is, of course, only one of the ductless glands comprising the endocrine system. In most instances enlargement of the gland is probably a symptom of general endocrine disturbance. Experimental work has shown that the thyroid is directly concerned in governing metabolism, having for its chief function the regulation of heat production. The control exercised by the thyroid may aptly be compared to the action of the hairspring of a watch or the old-fashioned governor of a stationary engine. Similarly it may be compared to the draft which enables a fire to burn.

Physiological research teaches that thyroid enlargement is usually a symptom, a compensatory hyperplasia dependent upon a relative or absolute deficiency of iodine. Increased activity of the glandular elements is associated with a decrease of the iodine store in the gland provided, of course, there is not a corresponding increased intake of the element. When the iodine store falls below 0.1 per cent, (1 milligram per gram of thyroid tissue) thyroid enlargement results. According to Marine,[1] thyroid enlargement may result from one of several causes:

1. An increase in the demand of the body for iodine during puberty, pregnancy, lactation, during the menopause, during certain infections and intoxications, following injury to the adrenal gland or as a result of diets consisting mainly of fat and protein.
2. Interference with the absorption and utilization of the normal intake of iodine.
3. Actual deprivation of iodine, either natural or experimental.

TYPES OF GOITER

Much of the difficulty which has attended the treatment of thyroid disease has been caused by lack of knowledge concerning the various types of the disease. Unfavorable and even disastrous results have followed the practice of treating all goiters by the same method. While various classifications have been proposed most of these are unnecessarily complicated and confuse rather than clarify the situation. Probably the simplest classification is that proposed by Plummer[2], who was the first to point out the distinction between adenoma with hyperthyroidism and exophthalmic goiter. Plummer's classification has the advantage of simplicity and clarity.

Plummer's classification of thyroid disease:

1. Diffused colloid.
2. Adenoma without hyperthyroidism.
3. Adenoma with hyperthyroidism.
4. Exophthalmic goiter.
5. Myxedema.
6. Cretinism.
7. Thyroiditis.
8. Malignant diseases of the thyroid.

Contemplation of this classification impresses one with the fact that goiter as-

sumes various forms, each of which has distinctive features and yet may be closely related to the other types. Consequently it becomes necessary, in order to diagnose and treat correctly, to differentiate between these types and individualize in the treatment thereof. For practical purposes it is sufficient to classify goiter according to three general types, colloid, adenomatous and exophthalmic. All other varieties are either variations or combinations of these. In the present discussion only the first four types of goiter, namely, the diffuse colloid, adenoma without hyperthyroidism, adenoma with hyperthyroidism and exophthalmic goiter will be considered.

PHYSICAL DIAGNOSIS

In attempting to decide which form of goiter one is dealing with the elementary methods of inspection, palpation and osculation should not be neglected because a great deal of valuable information can be obtained thereby. Practice will insure increasingly encouraging results in applying these methods. Ample time and thoroughness, tempered with gentleness of manipulation, are all essential to a successful examination. In this connection it is obvious that a thorough general physical examination is essential in order that coincident abnormalities in other portions of the body may be detected.

Various procedures have been advised in determining the size, shape and consistency of the enlarged thyroid. Many of the described methods are unnecessarily complicated and fail to afford information which materially supplements that .derived by more simple manipulation. Quite recently Lahey[3], has presented a useful method of palpating the lobes of the thyroid. Others have suggested mensuration as an appropriate means of determining the size of the gland but this is open to the objection that the tape measure can not readily be placed in the same position at succeeding examinations Whatever method is used in obtaining an impression of the physical status of the thyroid, the examination should invariably be supplemented by a thorough consideration of other signs and symptoms.

BASAL METABOLISM

Basal metabolism is the criterion of thyroid activity, measured by the heat production when the body is at rest and a sufficient time has elapsed to escape the stimulating effects of food. When the test has been competently made and the cooperation of the patient has been secured the resultant basal metabolic rate offers valuable corroborative evidence in the diagnosis of thyroid disorders. In this connection it should be remembered that a person cannot consistently depress his metabolic rate. However, many things such as headache, pain, discomfort, excitement, poor sleep or fear may cause an elevation of the rate. Such disturbing factors, then, must be taken into consideration. The so-called normal line of basal metabolism varies with age and is somewhat arbitrary. The usually accepted normal rates in healthy individuals vary from 10 below to 10 above zero.

For practical purposes it is important to know something of the diagnosis and treatment of the four principal forms of goiter, beginning with the diffused colloid. No form of goiter treatment is uniformly successful. In fact, disappointing results are sufficiently frequent to direct the attention to the need for accurate diagnosis, as well as patient, varied and skilful therapeutic effort. Many goiters disappear spontaneously, but why or under what conditions such cures are effected is not known, though the phenomenon is sufficiently important to merit careful study.

COLLOID GOITERS

Colloid goiter, otherwise known as simple, endemic, or adolescent goiter, occurs most frequently among girls between 15 and 25 years of age. However, the malady is not infrequently encountered at all of the earlier ages, even at birth. Frequently colloid goiter is devoid of symptoms except uniform fullness of the neck and perhaps slight nervousness. This condition is readily distinguished from true hyperthyroidism and exophthalmic goiter because there is no loss in weight or strength. The basal metabolic rate is never increased but is usually normal or subnormal. Clinically this condition is recognized by the symmetrical enlargement of both lobes and the isthmus, as well as by the characteristic soft granular feel of the tissue. It is the only type of goiter which disappears under iodine or thyroxin treatment and should not be considered a surgical condition except in rare instances of extreme enlargement. When cure does not follow the administration of thyroxin, desiccated thyroid or some form of iodine, the presence of an adenomatous lump in the gland may be suspected. It is not advisable to give iodine to patients over 25 years of age for the cure of a supposed colloid goiter because there is a possibility

of aggravating the existing condition and no imminent prospect of relieving it.

ADENOMATOUS GOITER WITHOUT HYPERTHYROIDISM

This condition is recognized by its irregular type of growth, there being one or more round nodules or tumors of varying consistency detectable by palpation. Usually patients with such goiters seek relief from pressure symptoms or for cosmetic reasons. Inasmuch as these goiters probably occur early in life and become toxic much later it is usually reasonable to delay operative procedure until after the age of 25. In this connection it should be understood that fully 95 per cent of the non-toxic adenomatous thyroids show no evidence of cell hypertrophy or hyperplasia. Both the colloid and adenomatous goiter without hyperthyroidism are amenable to preventive measures during the pregnancy of the child's mother and the early adolescence of the child himself.

ADENOMATOUS GOITER WITH HYPERTHYROIDISM

This goitrous manifestation is characterized by an increased basal metabolic rate which is excited by an excess of the normal thyroid hormone in the tissues. Adenomatous goiter with hyperthyroidism develops on an average of 17 years after the goiter was first noted. Provided the patient is in condition for operation prompt surgical intervention should follow the discovery of this form of goiter. Neither thyroxin, thyroid extract or iodides should be given to these patients because their condition is already due to an excess of thyroxin in the body. The hyperthyroidism in these cases cannot be reduced by medical treatment and the sole object of such preoperative measures is to prepare them for operative procedure.

EXOPHTHALMIC GOITER

It is, of course, highly important to differentiate between exophthalmic goiter and adenomatous goiter with hyperthyroidism because the treatment is different. The basal metabolic rate in the former is usually higher and there is more evident toxemia than in the latter. Moreover, the thrill and bruit over the superior thyroid vessels, which is usually found in exophthalmic goiter, is usually lacking in toxic adenoma. Moreover, toxic adenomas do not have the occular symptoms, crises or the nervous syndrome. The classical symptoms of exophthalmos, enlargement of the thyroid and rapid heart action, are usually present. However, one or more of these symptoms may be lacking while at the same time the patient has a well marked case of the disease.

SURGICAL TREATMENT OF EXOPHTHALMIC GOITER

Surgical intervention is favored by the majority of medical authorities as offering the most complete relief from the symptoms arising from exophthalmic goiter. Certainly operative procedure, after adequate preliminary preparation, is followed by an exceedingly low immediate mortality and usually by commendable results. At the same time is must be admitted that there are numerous relapses and reoccurences of the goitrous condition after operation. The failure of surgery to afford invariable relief in exophthalmic goiter has resulted in the institution of other measures, notably the so-called non-surgical treatment, radiology and the like.

NONSURGICAL TREATMENT OF EXOPHTHALMIC GOITER

Conservative treatment, variously termed "skillful neglect," medical treatment and non-surgical treatment, has justly achieved considerable popularity in treating exophthalmic goiter. Moreover, non-surgical treatment in properly selected cases appears to offer just as complete and permanent relief as radical intervention. It is not the purpose of the present paper to discuss in detail the methods employed in achieving these results. It may be stated however, that individualism, in which psychotherapy plays a leading role, is the basis of the curative measures. Moreover, various glandular extracts, iodides, mercurials and belladonna, have their fields of usefulness but must be applied with caution. Relief from stress, worry and undue excitement has a prominent place in this form of treatment. Then too, a non-flesh diet which is ample but free from irritants and stimulants, likewise serves to promote recovery. Unless there is serious cardiac involvement in the rigid rest cure is contraindicated.

THE USE OF LUGOL'S SOLUTION

Iodine in the form of Lugol's solution, (compound solution of iodine), has been adovcated by Plummer[4], as a temporary therapeutic measure in the treatment of exophthalmic goiter in order that a patient may be brought into a satisfactory condition for operation. Since this procedure has

been recommended, Lugol's solution has been erroneously used in many instances in which it was plainly contraindicated. Consequently much harm has been done both to the patient and to the reputation of the physician. Needless to say, Lugol's solution, when properly used, will greatly improve the condition of an exophthalmic goiter patient by eliminating many of the pre-operative procedures such as ligation, which have heretofore been considered necessary. Moreover, this preliminary treatment greatly enhances the patient's well being and safety before, during and after operation.

PROPHYLAXIS DURING PREGNANCY

A large and untilled field of definite promise is that of preventing thyroid enlargement both in the fetus and the prospective mother through the administration of iodine. That this satisfactory result can be achieved has been amply demonstrated by experimental ventures. The administra- of 30 c.c. of syrup of hydriodic acid or of an equivalent amount of iodine in another available form for a period of one month during the first half of pregnancy will afford maternal and fetal protection against thyroid disorder. Apparently this procedure prevents adenomatous as well as colloid goiters in offspring. This is particularly important because the adenomatous goiters are prone to malignant degeneration.

DANGERS OF IODINE PROPHYLAXIS AND TREATMENT

Much of the disrepute into which iodine prophylaxis and treatment has fallen in certain quarters is undoubtedly due to the fact that this important element has been greatly abused. It is now well known, and considerable evidence has accumulated to this effect, that apparently simple colloid goiters containing adenomatous tissue have been converted into toxic goiters through the administration of undue amounts of iodine. In certain susceptible individuals too, urticaria is said to have been caused by the administration of exceedingly small quantities of iodine, as, for instance, through the use of iodized table salt. Instances in which toxic symptoms have been set up by the use of proprietary remedies containing large amounts of iodine and by the prescribing of unnecessarily large amounts of iodine by physicians are not lacking. In view of these untoward effects it behooves all physicians prescribing iodine to regard this remedy as a potential poison. Moreover, it should be administered only when its use is clearly indicated and then only in small quantities.

CONCLUSION

In conclusion it may be pointed out that the treatment of goiter requires study, experience and practice in order that satisfactory results may be achieved. Unless he is properly qualified the average physician had better decline to inaugurate measures looking to the relief of inconvenience and suffering caused by goiter for he may aggravate rather than alleviate the symptoms. Confronted by a patient with goiter the first thought of the physician should be of diagnosis and the last of iodine. When this sequence is followed there is more opportunity for determining whether or not iodine is actually required.

Iodine is definitely useful in preventing colloid and adenomatous goiter in the fetus. Among adolescent children and young adults the element is of decided value in preventing and treating simple colloid enlargements of the thyroid, provided appropriately minute doses are employed. Iodine is strongly contraindicated in individuals with adenomatous or exophthalmic goiters, unless in preparation for surgical intervention in the latter form. If these precautions were more generally observed the reports of untoward results following iodine medication would materially diminish.

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Speaking at the convention of the Logical Society held in Milwaukee, a short time ago, Dr. Maud Slye is reported to have given it as her opinion that mating based upon a knowledge of heredity and eugenics would eliminate cancer from the human species in two generations. If the knowledge were available, any individual who knew himself to be by heredity susceptible to cancer could by mating with a non-susceptible individual, prevent the occurence of cancer in their children.

Christmas Memories

RENIG ADE

(John A. Dillon, M.D., Larned)

The spirit of Christmas pervaded the air. A bright crisp morning, presided over by a friendly unclouded sun, portended a snappy foursome at two-thirty p.m.

The colleges had unloaded their quota of home boys and girls. These had noisily arrived on incoming trains the past few days; just as they did twenty-five or thirty years ago with the possible variation that there were more Camels and legs in sight

This the Doctor noticed as one of the arrivals, a brazen, painted little scamp of eighteen summers, whose advent into the world a few years ago he had personally conducted, winked at him and squeezed his hand. The Doctor straightened up his shoulders and carelessly smoothed the wisp of hair that still guarded the old dome. A moment later when he saw the ugly old fellow who delivered trunks receive a similar wink and squeeze, he grinned to himself and murmured, "God bless their teasing little hearts; they just can't help it, their slogan is 'A Man's a man for a'That,".

The Doctor's mind wandered back to the brutal Christmas days of thirty years ago, and the depraved spirit of those times. In those days it was customary to get out the "quartet" and make Christmas Eve calls, after the children's programs were over, and the fire in Santa's whiskers at the Baptist church had been extinguished.

Those old songs may have lacked some of the qualities that are considered essentials in today's popular music, but they stirred emotions that present-day music fails to reach. Following the rendering of "Sweet Adeline," or "After the Ball," there oftentimes would not be a dry eye in the quartet.

It seemed to be the custom in those days for some rural maiden to seek a job in the city as 'twas supposed by her home folks, to be presiding over some well-ordered kitchen. Later, when a neighbor went to the big city with a carload of hogs, and accidentally ran across the maiden encased in a twenty-eight dollar fur coat and a five-dollar pair of shoes, her shameful story would be told in song. The result was "A Bird in a Gilded Cage," "Just Tell Them that You Saw Me," etc. Incidentally all the other maidens inwardly craved to go to the city and lead sad virtuous lives.

These songs the quartet of years ago sang with fervor, bringing out the minors with touching pathos and volume. Later in the evening when harmony and articulation became a bit fuzzy, "A Hot Time in the Old Town," with considerable thrumming on the guitar which now had only three strings left, was considered by the quartet to be very entertaining. It was at this time that the second tenor would become tearful and insist on telling what a good wife he had, or to use his exact words, "The best ———little woman in town."

Those old songs nearly always made somebody want to weep or do something sentimental.

Quite different are the songs of today. Can you imagine anyone crying when one of our stream-lined maidens puts on a gyratory folk dance and sings, "I've Got Them Colicky Blues"? Crying is distinctly contraindicated.

All this the Doctor reminiscently meditated as he wended his way to the office, forgetting to mail the letters that he carried in his hand. Then he attended to his correspondence.

The Differential Life Ins. Co., Omaha, Nebraska.

Gentlemen: Regarding question I failed to answer—cause of death of applicant's grandfather—you will notice the age was eighty-nine, which would exclude rickets or cholera infantum. The applicant can give me no definite information but admits it might have been whiskey.

I agree with you that it is very risky taking on these applicants with obscure family history. If 'twill help any I will weigh and measure applicant again.

Yours.

The Kalamazoo Collection Agency, Kalamazoo, Michigan.

Gentlemen: Yours received saying you had credited my account with one dollar collected, and that I owed you $15 for filing charges, and $10 for attorney's fees for threatening to start suit against one of my deadbeat patrons.

I am a notoriously poor business man, but even to me it doesn't look like a paying proposition from this end. Would it be possible for me to arrange to pay you these accounts in full at once; you to keep all the money and stop any further attorney's action? Would also be willing to pay you for any expense you have been to in collecting the dollar you mention.

Thanking you for your courtesy, I re-remain, Yours.

Mr. Amos Britt, Clinic Building.

Dear Amos: Yours received, and glad

to hear you are being gone over so satisfactorily at the clinic. From your description I judge they are very thorough in their work. You seem somewhat miffed that I overlooked your metabolism, and that you never had suspected you had one—that I said you had a rupture.

Now, Amos, I know just what you are going through, and just how you feel. You will come back dripping with symptoms and complexes. You were the champion biscuit eater of your township when you left, and could pitch horse-shoes all Sunday afternoon without a muscular twinge. Your wife tells me you always slept well except at butchering time when you ate too much liver and sausage. That you never were "ailing."

I think you had better come home just as soon as they take the last family group of your insides and get through scratching the soles of your feet. Don't have an Abderhalden test made unless they insist.

Was out to your place yesterday to see little Jim. Just plain bellyache—got out in the feed lot and licked out a trough that had hogdip in it—is all right now.

Yours.

General J. Marshall Bulger, Washington, D. C.

Dear General: Your letter received asking me to make free examinations for the citizens training camp, and to vaccinate and give serums to applicants, all free.

I am much enthused over this as usual, and hasten to signify my approval. I would also like to furnish tents, rifles, beans, bacon and oatmeal for the camp. While I am not in a position to do so at this time. I am contemplating endowing a home for unfortunate crap shooters who have lost their all in the service.

Before and since we entered the great war I have cheerfully examined recruits, given vaccines, serums, filled out forms, A, B, C, D., at all time of the day and night. All free.

And what do I get for it?

When I deduct the price of a box of Pazo's Pile Ointment from my income tax, said ointment being necessary by virtue of my straining to do my country's duty, I am cited to appear before an income tax hound at the court house and show cause.

I do not wish to complain, but on the square, General, can you cite me to any country, corporation, or commissary, that is handing anything out to the doctor labeled free?

Yours.

P. S.—I am signing up blank as you request, durn my fool skin.

KANSAS MEDICAL LABORATORY ASSOCIATION

NOTE

With this issue of the Journal this column is turned over to the editorship of C. M. Downs, Department of Bacteriology, University of Kansas. Dr. N. P. Sherwood, the retiring editor, has instituted the policy of publishing papers concerning laboratory methods which would be practicable and profitable for the laboratory worker and also for the physician who is directing laboratory work. It is hoped that these articles may lead ultimately to a standardization of laboratory technique. It will be our pleasure to continue what we feel is an excellent and profitable policy.

The Use of Halogenated Phenolphthalein in Cholecystography and Determination of Liver Function*

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* From the Department of Surgery, Washington University School of Medicine and Barnes Hospital.

Perhaps no single group of chemicals has been so helpful and of so much assistance in the field of medical diagnosis, as have the derivatives of phenolphthalein, especially the halogenated group. This vast field was originally opened by Abel and Rowntree in 1909 who initiated investigations regarding their comparative value as cathartics. In 1910, Rowntree and Geraghty announced the discovery of phenolsulphonphthalein as an agent to determine the function of the kidney.

In 1913, Rowntree, Hurwitz and Bloomfield found that the specific excretion of the dye phenoltetrachlorphthalein, through the bile, made possible a test of hepatic function. The difficulties encountered in the collection of the dye in the feces aroused McNiell, two years later, to institute the collection of the dye from the duodenum by means of the duodenal tube. In 1922, Rosenthall, by ascertaining the length of time required by the liver to eliminate the dye from the blood stream, brought the test up to its modern value. Since that time, possible improvements have been offered by the announcements of Delprat in the substitution of the original dye for rose bengal (diodotetrachlorfluorescene) and of Rosenthal and White for bromsulphalein (phenoltetrabrompthalein sodium sulphonate).

Three years ago, working with Graham

and later with Cooper, we developed a technique for cholecystography, using the calcium and sodium salts of the halogenated phenolphthaleins. The first substance used was sodium tetraiodophenolphthalein. Adequate shadows of the gallbladder were produced experimentally, but, due to impurities in the first lot obtained, we changed to the calcium and sodium salt of tetrabromphenolphthalein for clinical use. A short time later a pure preparation of the sodium salt of tetraiodphenolphthalein was obtained and this was used routinely because of a smaller dose required. It would seem logical to follow this with the development of a method for simultaneously obtaining cholecystograms and determinations of the excretory power of the liver by using only one dye. This was made possible by the change from teraiodophenolphthalein to phenoltetraiodopthalein. The latter substance produces satisfactory cholecystograms and stains the blood serum so that determinations of liver function can be made at the same time if the serum is alkalinized after its withdrawal. Phenoltetraiodophthalein has an added advantage in the fact that the dose required to cast an adequate shadow of the gallbladder is smaller and that the reactions are practically eliminated.

The dose of phenoltetraiodophthalein is .04 grams per kilo. We do not exceed 2.5 grams, however, regardless of the weight of the patient. The solution is made by dissolving 2.5 grams of the sodium salt in 30 or more c.c. of freshly distilled water by gentle heat, and is filtered. The solution will keep much better if sealed tightly and not exposed to direct sunlight. It is sterilized in a boiling water bath for 15 to 20 minutes.

The dye is given intravenously in the morning between 8 and 9 a. m., all in one dose, on an empty stomach. A specimen of blood is taken before administration of the dye and one half hour after it is given. Roentgenograms are taken 4, 8 and 24 hours after injection.

The technique for administration of tetraiodophenolphthalein is the same as given above for phenoltetraiodophthalein except that the dose is 3.5 grams (proportionately less, if the patient is underweight). Since it is not a true dye, blood samples cannot be used for determination of liver function. Regardless of the drug used, lunch should be omitted, or consist of a liquid diet low in fats and proteins. Phenoltetraiodophthalein has no advantage over tetraiodophenolphthalein for oral use. Interpretations of the roentgenograms are made upon several characteristics, including: absence of shadow, density of shadow, distensibility, persistent deformities, and intrinsic negative or positive shadows. These features are fully discussed in previous articles.

Standard solutions of prenoltetraiodophthalein must be made for comparison with the samples of stained blood serum obtained for reading on the determination of liver function. If 48 milligrams of the dye are added to 100 cc. distilled water to make up the standard, the resultant solution will equal the 100 per cent standard or will represent the concentration of the dye in the blood stream after injection, before any of it is excreted by the liver. In arriving at the figure 48 milligrams, we have used the ratio 1 to 12 for estimating blood volume, as is recognized by Ehrlanger and others. Twelve to fifteen dilutions of standards should be made, varying from 2 to 90 per cent. A small amount of 5 per cent sodium hydroxide must be added to the standard to prevent fading. The ideal amount to be added to 4 or 5cc. of standard, is as follows: One drop of 5 per cent sodium hydroxide for dilutions between 60 and 100 per cent, two drops for dilutions between 20 and 60 per cent, three drops for dilutions between 2 and 20 per cent.

The readings of retention of dye in the blood serum are made in a manner almost identical to that used in the Rosenthal modification of the phenoltetrachlorphthalein test for liver function. A retention of less than 15 per cent of the dye in the blood serum one half hour after injection of the dye, and less than 4 per cent one hour after injection is considered normal. Retention of any greater amounts for the specified time are considered abnormal.

The largest amounts of retention have been found in patients having hepatic cirrhosis with ascites, and may be as high as 80 to 90 per cent one half hour after injection. Retentions almost as great have been seen in patients having acute hepatitis with cholangitis, usually with slight jaundice. An interesting and almost constant fact has been observed, viz., that a mild retention above normal, ranging between 17 and 35 per cent, is found in cases of cholecystitis. This is probably explained by the practically constant hepatitis accompanying cholecystitis, as was demonstrated by Graham a few years ago.

As previously stated, since phenoltetraiodophthalein has no advantage over teraiodophenolphthalein for oral use in cholecystography, we still use the latter for that purpose. Since the intravenous administration of the dye continues to give a diagnostic accuracy of 97 per cent which is higher than that obtained from the oral method of administration in our hands, we use the latter method only in a comparatively small number of cases. If a normal series of shadows of the gallbladder are obtained by the oral method, the accuracy will probably be equal to that following intravenous administration. However, if faint shadows or no shadows are obtained by the oral method, indicating a pathological condition of the gallbladder, a check should be made by the intravenous method, because of the possibility of insufficient absorption of the drug from the intestine. One of the most satisfactory methods of oral administration has been suggested by Larimore. Eight tenths of a gram of tetraiodophenolphthalein are mixed with one tenth of a gram of sodium bicarbonate and one tenth of a gram of powdered agar and put into a gelatine capsule. Usually a coating of salol is not found necessary, but may be used if desired. Five or six of these capsules are given following the evening meal. Breakfast is omitted. The patient reports for roentgenograms at 9 a. m., 1 p. m., and 5 p. m. the next day. Food should not be allowed until after the second roentgenogram at 1 p.m. A plain plate of the abdomen should be taken at 9 a.m. to determine if the contents of the capsule have broken up and are absorbed. The powdered agar and alkali promote the dissolution of the contents of the capsules.

Reactions of any consequence have occurred so rarely following the intravenous injection of phenoltetraiodophthalein that they have come to be practically ignored. Observations have proved quite conclusively that the occasional reactions following intravenous administration, consisting of nausea, have been less common than reactions consisting of cramps, nausea and diarrhea which occasionally follow the oral administration.

UNIVERSITY OF KANSAS CLINICS.

Clinic of Dr. Earl C. Padgett

Department of Surgery

CLEFT PALATE

We have this morning for consideration two cases of a more or less uncommon congenital malformation;—namely, two cases of cleft palate.

The condition is said to occur on an average of one in about every three thousand births. One of these cases has also a cleft lip or as more frequently designated,—a hare lip. The other has a cleft of the soft palate or velum which also extends about one quarter of an inch into the hard or bony palate.

The cause of the absence of the normal closure and fusion of the maxillary, premaxillary and nasal embryonal processes is not known but many surmises have been offered in explanation. However, about all that we actually know is that whatever the cause, it is active before the first six weeks of intra-uterine life, because at that time normally the processes have become fused. We will not detain ourselves with a further discussion of the more exact embryology and the more rare possbilities such as medium clefts of the lip and nose, for although it is interesting it is somewhat complicated.

If you will notice in both of these particular cases the lip and alveolar clefts are on the left side. Curiously, single hare lips are slightly more common on the left side. No adequate reason has been offered to explain this. As more or less analogous conditions, you will probably remember that the left side of the body is favored in at least three other conditions, although there may be others, I recall off hand, inguinal hernia, varicocele and the socalled "milk leg of women." However, a slightly different anatomy probably explains the slight left side prevalence of these latter conditions.

Case 1. We will discuss this little girl with the incomplete cleft first. She is about one year of age. Soon she will begin to learn to speak. It is the ideal time for her to be operated. The mouth is wide enough for one to work fairly easily. Providing she has no nasal or pharyngeal infection, we may practically assure her of a good closure with a fairly long palate. This is most important for if the soft palate and pharyngeal wall behind fail to come in contact she will likely be handicapped in her speech. After all, a short soft palate contracted by scar so far as speech is concerned, is only slightly better than an open cleft. We should always strive for length in palate closure.

Case 2. This boy who is about two years of age, as you will note, has had previously a fairly good lip repair. The nostrils are the same size and even. The lip is not tight and is fairly short. A short lip of good contour is the best. We might mention in passing that the best time to close the cleft lip is

as soon after birth as possible. At this time a good closure can be made. One need not worry about the alveolar ridge separation if the lip is closed over the alveolar cleft. The alveolar processes soon come together as the child grows The Brophy operation of wiring the alveolar ridges together has been discarded by most of the present day surgeons. First, it is unnecessary; secondly, it is quite a severe procedure; thirdly, it often does considerable damage to the tooth buds lying in the alveolar processes; and last, and possibly most important, cases are now being seen who ten or twelve years ago had the Brophy operation performed that have very marked deformity of the upper face bones. This includes a narrow alveolar arch, a high narrow palate, and a shortened projecton of the maxillae, ie, the lower jaw had developed in advance of the upper jaw. This is a very unsightly deformity. This boy has had one operation previously to close his palate. It will make closure this time a little more difficult and also it will be difficult to get a long palate because of some scar contracture in the flaps which decreases the normal length of the palate flap halves.

In regard to the type of operation, in the majority of cases, the von Langenbach operation is preferred by us. It is an old operation and was done at least seventy five years ago. However, it is seldom done correctly. Most operators fail to get their flaps adequately loosened, with, at the same time, preservation of their blood supply, which can be done. The operation has the advantage of simplicity. Two incisions are made along the posterior two thirds of the inner sides of each alveolar ridge and extend in a curve directly behind the posterior edge of the alveolar ridge outward to the cheek. With a special elevator the mucoperiosteal flaps are raised from the bone until they are entirely free. The posterior palatine artery is always preserved if possible for it is the chief source of arterial supply to the flaps. When one severs this artery he courts disaster, as the flap may slough from insufficient blood supply. One can practically always leave this artery intact. The aponeurosis connecting the soft palate with the hard palate must be cut loose on the upper surface from the posterior free edge of the palate bone. The flaps have to be well freed so that there is absolutely no tension, ie, so that each flap will more than cross the midline. This being obtained, the mucous membrane is carefully cut from each inner edge on each side of the palate. Finally, using horsehair sutures the palate is closed carefully down the midline. The sutures are placed so that as wide a margin of raw surface to raw surface is obtained as possible. In the side incisions is placed a small gauze pack which straddles the intact artery.

If one selects his cases when free from naso pharyngeal irritation, or in other words "colds," preserves the artery, and loosens his flaps well, he should not anticipate more than one failure of union in ten cases. This particular operation has an advantage which in event of non-union the Lane flap operation does not always have, in that there is little likelihood of one of the flaps sloughing—a disaster very difficult to remedy. Following the von Langenbach operation, in case of failure of closure, there is practically no loss of tissue.

After operation no solid food is given for at least two weeks and it is well not to examine the case in such a manner that gagging may be produced. The side packs are removed within forty eight hours.

Clinic of Dr. C. B. Francisco

Department of Orthopedic Surgery

TUBERCULOSIS OF THE ELBOW JOINT IN THE ADULT

I wish to present this case to you as an example of one of the rare tubercular conconditions in the adult. The fact that it is of infrequent occurrence implies that the diagnosis is missed usually after the process is advanced. For that reason, it is important for the physician to keep these uncommon conditions in mind.

It has been said that the reason that tuberculosis is rare in joints of the upper extremity (Whitman classes it as constituting about one per cent of all tubercular joints) is that traumatism in these joints is less than in those of the lower extremity. This same argument has been used to explain why tuberculosis is more common in the right upper extremity than it is in the left.

As you know, tuberculosis of the joints depends upon three factors:

1. The presence of a primary focus elsewhere in the body.

2. An existing predisposition to tuberculosis.

3. The localizing element of injury, which is not a constant factor.

Usually, the early diagnosis is rheumatism and the patient is so treated. I might add that until some actual destruction has

occurred, as revealed by the x-ray, the diagnosis is not made easily.

TREATMENT

But one method of treatment is indicated in tubercular joints in the adult; and that is fixation by operation. If the consent of the patient to be operated cannot be gained, then aspiration of the abcesses, with immobilization, should be the plan of treatment, hoping that eventually Nature will ankylose the joint.

PRESENTATION OF CASE

The case that I wish to show you today is an exceedingly instructive case from the standpoint of the outcome of tuberculosis of the joint, the final issue depending upon whether or not the primary focus is, or becomes active.

I have had two other cases that we diagnosed as tuberculosis of the elbow joint. (1) A colored male aged 25, whose condition was proved to be tuberculosis of the right elbow joint at operation in Cook County Hospital, Chicago. He has not returned since April, 1924, however; and the end result in his case is not known. (2) A colored female, 19 years of age, whose case was diagnosed as tuberculosis of the left elbow by x-ray and by physical findings. She did not return for treatment, having been seen at the Clinic in 1924; and in her case also, the end result is not known.

The case whom I present, H. B., colored, male, aged 42, janitor, first came to the Out Patient Department on March 8, 1923. He stated at that time that his first symptoms began about the first of January of that year; that he was not aware of having injured the arm, though there had been considerable pain for the first few weeks. At that time, he was not suffering much pain, though the arm was swollen and sore. He further stated that he had no night sweats, no cough, and had suffered no previous illnesses of any consequence except "flu" in 1918; and that he was gaining in weight. Patient is married; wife living and well; they have no children; his wife has had no miscarriages. His father and mother are dead, the mother dying when the patient was six years of age and the father more recently. Causes of death are unknown.

The elbow presented at that time an enlarged and fluctuating mass below the external condyle. This was aspirated and about 15 c.c. of flocculent light pus were obtained. An x-ray picture was made, which showed definite destruction of the cartilage of the external condyle, as well as of the olecranon fossa, and a hazy appearance throughout the elbow joint.

A splint was applied and the patient was advised to come into the hospital, but was unable to arrange for hospitalization at that time. He continued to come to the dispensary where he was aspirated occasionally and his elbow was kept immobilized in plaster.

In October, the patient came into the hospital. Upon admission, his general examination essentially was negative, with the exception of slight dullness in the apex of each lung. There were no rales and no other physical findings that suggested a pulmonary condition, his elbow being about the same as at his examination in the dispensary. The blood count showed 5,500,000 with a hemoglobin of 85 per cent, 9,500 white cells, 54 per cent polymorphonuclears, and a negative Wassermann.

On October 16, 1923, the elbow joint was opened and a large quantity of necrotic tissue was removed from within and around the joint. The cartilage of the condyles, as well as the cartilage of the olecranon fossa, was removed and the bones were placed in apposition. The wound was wiped out with carbolic acid and alcohol and closed without drainage. Patient was discharged from the hospital in a few days and healing was practically *per primum*. The Laboratory reported the tissues tuberculer.

In December, the abscess had filled up; and, upon aspiration, 25 c.c. of clear fluid were obtained. On January 12, 1924, there was no sign of inflammation around the affected joint; and he had at that time, a few degrees of motion. On February 12, 1924, a new cast was applied. We have not seen him since until this date (January 11, 1927).

He states that he had no further trouble with the elbow until about five weeks ago, when he noticed that it was swelling again. At the same time, he developed what he calls "a heavy cold," says he has lost about twenty pounds in weight; and you can see by his appearance that he is weak and very much emaciated. He has a continuous cough and his breathing is labored. The elbow fluctuates from the outer side; and we shall proceed to aspirate. The pus is quite thick and we have obtained 20 c.c. There are a few degrees of motion at the elbow joint.

It is evident to you that this man is in the advanced stages of a pulmonary condition; and, that while we failed to obtain

ankylosis of his elbow joint, this failure is not the cause of his present decline.

CONCLUSION

In treating tuberculosis of the joint, it is just as important to watch carefully the general condition as it is to clear up the local manifestations. One should remember that there is a primary focus somewhere. In this man's case, there was no evidence of activity in his lungs at the time we operated upon him. From his history one would suspect that this activity has developed recently and will be the actual cause of his death, the elbow joint having contributed a minor share.

———R———

New Discovery May Explain Many Food-Poisoning Cases

A new food poisoning organism discovered by a microbiologist of the Bureau of Chemistry, United States Department of Agriculture, may possibly aid in explaining many poisoning cases that could not be attributed to organism of the common food-poisoning group. Organisms of the latter group—known scientifically as the paratyphoid-enteritidis group—are the only ones hitherto recognized as a cause of intestinal disturbances. The new organism, although it has not been identified as any well-defined species, belongs to another group. In appearance it has much in common with the ordinary lactic types used in the preparation of "starters" for butter and cheese making.

The new organism was first believed to be a source of food poisoning when B. A. Linden of the Bureau of Chemistry found it in a sample of imported cheese held responsible for an outbreak at Biddeford, Me., in 1925. Milk cultures of the organism were made and fed to cats in which violent intestinal disturbances were produced within a few hours. The same organism has since been isolated in two other outbreaks, in both of which cheese was the one article of food eaten by all persons affected. Organisms of the old group of food poisoners, so commonly reported to be the cause of food poisoning outbreaks, were not found. In each of these outbreaks, the streptococci, the group to which the newly found organism belongs, were recovered and fed in milk cultures to cats with results like the first trials.

So far no sickness has been produced in experimental tests except when milk was used as a culture medium. The organism will grow and multiply on meat and other media, however, and this may possibly leave many avenues open for contaminating human food.

Dr. Charles Thom, in charge of microbiological work for the Bureau of Chemistry, regards the discovery of this organism as the most outstanding achievement of the year in his field of investigation. He further suggests that while there is no general danger from this source of poisoning it does offer another forceful argument for the pasteurization of milk before using it in manufacturing dairy products.

———R———

Abbott Laboratories Sales School

The salesmen of the Abbott Laboratories and the Dermatological Research Laboratories from the Middle West and the South met in the home offices of that company, in North Chicago, the week of December 27. Over forty representatives were present at this meeting, including one from the Pacific Coast, two from Texas, three from Canada, one from Atlanta, Ga., and three from the Eastern sales force.

Four days were spent in intensive study of the Abbott and D. R. L. products. Playlets were staged illustrating sales points and round tables were conducted on subjects of importance to the salesmen and the firm. On Tuesday evening, December 28th, the salesmen were invited to attend the Annual Christmas dinner and dance given by the employees of the Abbott Laboratories. Over 500 were in atendance at this function. On the following evening the salesmen were entertained at a banquet given by the Abbott Laboratories in their own cafeteria, recently installed at the North Chicago plant. Addresses were given at this meeting by Dr. Alfred S. Burdick, President of the Abbott Laboratories, who reviewed the progress of the company and introduced Dr. G. W. Raiziss, Professor of Chemotherapy, University of Pennsylvania, who spoke on the newer arsenical compounds, particularly Bismarsen, a new combination of bismuth and arsenic; Dr. Roger Adams, Professor of Chemistry, University of Illinois, who told of his investigations in the field of chaulmoogric acids; and Dr. A. G. Young of the University of Michigan, who spoke of the treatment arthritis deformans with o-iodoxy benzoic acid, amidoxyl. A meeting of the Eastern sales force of the Abbott Laboratories will be held in New York City in January.

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PROPOSED BASIC SCIENCE ACT

Before this number of the Journal has reached the members of the Society a bill will have been introduced in both houses of the legislature providing for what is called the Basic Science Act. This bill was constructed from a draft prepared by the Bureau of Legal Medicine and Legislation of the A. M. A.

In an article which appeared in the January number of the Bulletin, Dr. Woodward, executive secretary of the Bureau, describes the purposes of this act. We quote from his article:

"Basic science acts recognize the existence of various cults and of the dogmas about which they have been organized. They recognize also, however, that nonsectarian practice and cult practice are based on fundamental sciences with which dogma has and can have nothing to do—such sciences for instance, as anatomy, physiology, chemistry, bacteriology and pathology. Basic science acts, therefore, ignore all dogma and fix for all practitioners a uniform minimum standard in the sciences named.

"To avoid the prejudices of cultists against examinations by nonsectarian boards and the distrust of nonsectarian practitctioners in the ability of the cultists to conduct adequate examinations even in the fundamental sciences, basic science laws provide that the board shall be made up of persons not engaged in the practice of the healing arts. They overcome existing differences in the standards of preprofessional education by allowing even high school graduates to be examined in the basic sciences. Persons who pass the examinations held by the basic science board are given certificates to show that fact. Such certificates, however, do not entitle them to practice in any way; they merely authorize their admittance, on the compliance with other necessary conditions, to examination by any one of the several professional examining boards the certificant may elect. Without a certificate no applicant can be examined professionaly. However, the certificate alone does not entitle him to appear for examination before any professional board; each board may impose such further requirements as the laws of the state authorize. The medical examining board may require evidence of at least two years of college work, of four years of study in a medical college and of one year of hospital experience, before admitting the applicant to examination. The chiropractic examining board, however, may be satisfied to accept the certificate of the basic science board as evidence of adequate preprofessional education—graduation by a high school—and insist on evidence of a graduation by a chiropractic college after not less than eighteen months of study. Other boards are at liberty similarly to apply their own standards to applicants seeking licenses from them. Every board is at liberty to accept as adequate the examination given by the basic science board in the fundamental sciences or to reexamine the applicant on those sciences.

"The reasonableness and fairness of the plan outlined is obvious. It recognizes that a certain knowledge of anatomy, physiology, chemistry, bacteriology and pathology is at the basis of all diagnosis and treatment whatever. It recognizes that the possession of such knowledge by all practitioners is necessary for the safety of the public. It ignores all differences of opinion among practitioners as to methods of diagnosis and treatment and sets up a nonprofessional board, representing the public, to determine the fundamental fitness of all would-be practictioners. Such candidates as this nonsectarian board has determined to be fit, and no others, are premitted to appear before the professional examining boards. The professional boards retain their present function of determining the fitness

of the applicant to practice the particular method of healing professed by him. The method comes as near as any plan that has yet been offered to establishing a single standard for all who practice the healing arts in those states having independent sectarian boards. How far it is applicable to states having mixed boards depends on the organization and methods of such boards.

"To facilitate a study of the basic science law and its adoption where deemed desirable, the Bureau of Legal Medicine and Legislation has prepared the draft of such a law and submits it herewith. The draft is susceptible of modification to meet the needs of any particular state and the ideas of those who seek to promote such legislation in any state. The draft is not offered as the last word in basic science laws. On the contrary, the bureau will welcome criticisms by state medical associations, county medical societies, medical examining and licensing boards and the medical profession generally. Through such criticisms it will be possible to perfect a bill that will represent the consensus of medical opinion throughout the country."

Any effort to get a single standard one board bill passed would be a hopeless undertaking at this time. The sentiment in the profession in favor of such a bill is not sufficiently strong to give it the necessary support; and the opposition the cults are able to show would defeat it. Neither the medical profession nor the cults are willing to surrender entirely the control of the qualification requirements of those admitted to practice with them. The basic science act permits the same control as now, except that certain qualifications are established as a prerequisite to the consideration by any of the examining boards of any applicant for a license to practice the healing art.

This act will create an additional board, but that will not be a serious objection to the politicians. It will create an additional income to the state, at least sufficient to pay the expenses of the administration of the law. It will add something to the cost of registration, but since those who are already licensed in the state are exempt, this need not be a serious objection.

The draft of a basic science act prepared by the Bureau of Legal Medicine and Legislation of the A. M. A. provided for the composition of the board of examiners as follows:

SECTION 3. **Board of Examiners in the Basic Sciences: Appointment and Personnel.**—The Governor shall appoint a State Board of Examiners in the Basic Sciences (hereinafter referred to as the board), consisting of five members, who shall be appointed one for one year, one for two years, one for three years, one for four years and one for five years, from the dates of their respective appointments. On the expiration of the term of any member, the Governor shall fill the vacancy by appointment for a term of five years. On the death, resignation or removal of any member, the Governor shall fill the vacancy by appointment for the unexpired portion of the term. Every member shall serve until his successor is appointed and qualified. The members of the board shall be selected because of their knowledge of the basic sciences aforesaid. No member of the board shall be actively engaged in the practice of the healing arts or any branch thereof.

There are some objectionable features in this section. Dr. Woodward makes the following note on the various plans that have been proposed for the composition of the board:

"This section aims at the creation of an examining board in which, by reason of the overlapping of the terms of members, there will be a continuity of policy and administration. No direct prohibition has been placed on the appointment of physicians, osteopaths, chiropractors or other cultists, except that the appointee shall not be in active practice. It has been proposed to limit the appointments of members of basic science boards to members of faculties of approved universities and colleges. It has been proposed, too, to forbid the appointment of anyone having any connection with any school teaching the healing art in any form, or any one interested in any such school. The provision here made leaves to the Governor the determination of the advisability of appointments within the classes just named. So far as the medical profession in any state is concerned, it should certainly be able to bring enough influence to bear on the Governor to see that the rights of nonsectarian medicine are not infringed in making appointments."

In this state there would probably be some difficulty in making up this board so that it would conform to these specifications. There would be some difficulty in finding five men well informed in the basic sciences who are not engaged in the prac-

tice of the healing art. On the ather hand those designated to serve on this board, in the bill printed below, are not perhaps well informed in the basic sciences, but they may appoint some who are so informed to conduct the examinations or at least prepare the questions for them.

From a political point of view, there is a very serious objection to this provision for the composition of the board. While it provides for another board it does not create any new jobs. Those designated as members of the board are already in the pay of the state.

It is of the greatest importance that the administration of this act should not be controlled by any group of practitioners of the healing art and the bill proposed guarantees that condition. It is also important that the examining board should be free from political influence. It is quite certain that a board composed as proposed in this bill will be less under political influences than one appointed by a governor.

The bill as proposed follows:

DRAFT OF PROPOSED BASIC SCIENCE ACT

An Act to establish a state board of examiners in the basic sciences underlying the practice of the healing arts, to provide for its organization and powers, to provide that certification by such boarq be a prerequisite to edigibility for examination for license to practice the healing arts and to define healing arts.

Be It Enacted by the Legislature of the State of Kansas:

SECTION 1. **Basic Science Certificate Required.**—No person shall be eligible for examination or permitted to take an examination for a license to practice the healing art or any branch thereof, or granted any such license, unless he has presented to the licensing board or officer empowered to issue such a license, a certificate of ability in anatomy, physiology, chemistry, becteriology, pathology, diagnosis and bygiene (hereinafter referred to as the basic sciences), issued by the state board of examiners in the basic sciences.

SECTION 2. **The Healing Art Defined**—For the purposes of this Act, any license authorizing the licentiate to offer or undertake to diagnose, treat, operate on or prescribe for any human pain, injury, disease, deformity or physical or mental condition is a license to practice the healing art.

SECTION 3. **Board of Examiners in the Basic Sciences:-Composition**—The State Board of Examiners in the Basic Sciences shall be composed of the Chancellor of the University of Kansas, the President of the Kansas State Agricultural College, the President of the Kansas State Teacher's College at Emporia, the President of the Kansas State Teachers' College at Hays, and the President of the Kansas State Teachers' College at Pittsburg.

SECTION 4. **Organization of Board: Election of Officers, Seal, Rules, Compensation**—The Board shall meet and organize as soon as practicable after the passage of this act. It shall have power to elect officers, to adopt a seal, and to make such rules as it deems expedient to carry this Act into effect. The board shall keep a record of its proceedings, which shall be prima facie evidence of all matters contained therein. Each member of the board shall receive Ten Dollars per diem and actual expenses, when actively engaged in the discharge of his duties. The compensation of the members and other expenses of the board shall be paid out of the fees received from applicants, but this is not to be construed as preventing appropriations to cover deficits. The treasurer of the board shall give such bond, running in favor of the state, as the state treasurer shall determine. The office of the board shall be in the state capital, and quarters for such office shall be assigned in the capital building or any other building occupied by the state government.

SECTION 5. **Fees Payable by Applicants**—The fee for examination by the board shall be Fifteen Dollars. The fee for re-examination within any twelve month period as hereinafter provided shall be Five Dollars, but the fee for re-examination after the expiration of twelve months shall be the same as the original fee. The fee for the issue of a certificate by authority of reciprocity on the basis of qualifications as determined by the proper agency of some other state, shall be Five Dollars. All fees shall be paid to the board by the applicant at the time of filing application. The board shall pay all money received as fees into the state tdeasury, to be placed in a special fund to the credit of the board. The auditor of state is hereby authorized to draw his warrant upon the treasurer who shall pay out of such fund all expenses incurred by the board, on vouchers signed by the president and the secretary of the board.

SECTION 6. **Examinations.**—The board shall conduct examinations at such times and places as it deems best. Every applicant, except as hereinafter provided, shall be examined to determine his knowledge, ability and skill in the basic sciences. The examination shall be conducted in writing, but may be supplemented by an oral examination, and if practicable shall be supplemented by an examination in the laboratory, dissecting room and dispensary, and at the bedside. If the applicant receives a credit of 75 per cent or more in each of the basic sciences, he shall be considered as having passed the examination. If the applicant receives less than 75 per cent in one subject, and receives 75 per cent or more in each of the remaining subjects, he shall be allowed a re-examination at the examination next ensuing, an opplication and the payment of the prescribed fee; but he shall be required to be re-examined in all branches. If the applicant shall receive less than 75 per cent in more than one subject, he shall not be re-examined within the period of one year next following his original examination, nor unless he presents proof satisfactory to the board of additional study in the basic sciences sufficient to justify re-examination.

SECTION 7. **Requirements for Certificate**—No certificate shll be issued by the state board of examiners in the basic sciences unless the person applying for a certificate submits evidence satisfactory to the board: (1) that he is not less than twenty-one years of age; (2) that he is a person

of good moral character; (3) that he was graduated by an accredited high school or school of similar grade, or possessed educational qualifications equivalent to those required for graduation by such an accredited high school, before he began the study of the healing arts, and (4) that he has a comprehensive knowledge of the basic sciences as shown by passing the examination given by the board, as by this Act required.

SECTION 8. **Reciprocity**—The state board of examiners in the basic sciences may in its discretion waive the examination required by section 7, when proof satisfactory to the board is submitted, showing that the applicant has passed the examination in the basic sciences before a board of examiners in the basic sciences or a board authorized to issue licenses to practice the healing art, in another state, when the requirements of that state are, in the opinion of the board, not less than those provided by this Act. The provisions of this section shall apply only to examinations conducted by the boards or officers of states that grant like exemptions from examinations in the basic sciences to persons granted certificates by the board of this state.

SECTION 9. **Appeal from Board's Decision.**—Any applicant who has been denied examination by the board may within thirty days after such denial appeal to the district court for the county in which the board has its office; and such court shall on such appeal inquire into the cause of such denial. If in the opinion of the court admission to examination was refused without just cause, the court may order the board to examine the applicant. Notice of an appeal from the denial of the board of the right to examination may be served on any member of the board by leaving with him any adult member of his staff or household, at his usual place of business or abode, an attested copy thereof within thirty days after said board has notified the applicant of its refusal to examine him. Hearings of such appeals shall proceed in accordance with such rules as the district court may determine.

SECTION 10. **Certificates and Licenses Void.**—Any basic sciences certificate and any license to practice the healing art or any branch thereof which is issued contrary to this act shall be void. A board which has issued a license by virtue of a void basic science certificate shall revoke or cancel such license. The procedure in such revocation or cancellation shall be in accordance with the provisions of the act under which such license was issued, for the cancellation or revocation of licenses generally. The certificate issued to any person by the state board of examiners in the basic sciences shall be automatically revoked by the revocation of any license issued to such person to practice the healing art or any branch thereof.

SECTION 11. **Practice Without Basic Science Certificate Forbidden.**—Any person who shall practice the healing art or any branch thereof without having obtained a valid certificate from the state board of examiners in the basic sciences, except as otherwise authorized by this act, shall be fined not more than One Hundred Dollars or imprisoned for not more than 30 days, or both, in the discretion of the judge.

SECTION 12. **Fraudulent Certificates Forbidden.**—Any person who shall obtain or attempt to obtain a basic science certificate by any dishonest or fraudulent means, or who shall forge, counterfeit or fraudulently alter any such certificate, shall be fined not more than Five Hundred Dollars, or imprisoned not more than 12 months or both, in the discretion of the judge.

SECTION 13. **Fraudulent Licenses Forbidden.**—Any person who shall obtain or attempt to obtain a license to practice the healing art or any branch thereof from any board authorized to issue any such license, without presenting to said licensing board a valid certificate issued by the state board of examiners in the basic sciences, as in this act required, shall be fined not more than Five Hundred Dollars or imprisoned not more than 12 months, or both, in the discretion of the judge.

SECTION 14. **Issue of Fraudulent Licenses Forbidden.**—Any person who knowingly issues or participates in the issue of a license to practice the healing art or any branch thereof to any person who has not presented to the licensing board a valid certificate from the state board of examiners in the basic sciences, or any person who has presented to such licensing board any such certificate obtained by dishonesty or fraud, or any forged counterfeit certificate, shall be fined not more than Five Hundred Dollars, or imprisoned not more than 12 months or both, in the discretion of the judge.

SECTION 15. **Fees Paid Unauthorized Practitioners Recoverable.**—Any money paid out by any person as compensation for services rendered in the practice of the healing art or any branch thereof to any person not validly licensed to practice such healing art or branch, when the payor did not know that such person was not validly licensed so to practice, may be recovered by the person who has paid such money by a suit instituted within two years from the date when such fee or compensation was paid.

SECTION 16. **Enforcement.**—The state board of examiners in the basic sciences and the various boards authorized to issue licenses to practice the healing art or any branch thereof shall investigate any supposed violation of this act and report to the proper county attorney all the causes that in the judgment of such board warrants prosecution. Every police officer, sheriff and peace officers shall investigate all supposed violations of this act and apprehend and arrest all violators thereof. It shall be the duty of the attorney-general and of the several county attorneys to prosecute violations of this act.

SECTION 17. **Exceptions.**—This Act shall not be construed as applying to dentists, nurses, midwives or optometrists, practicing within the limits of their respective callings; nor to other persons licensed to practice the healing art or any branch thereof in this state when this Act takes effect; nor to persons specifically permitted by law to practice without licenses, practicing within the limits of the privileges thus granted to them.

SECTION 18. **Saving Clause.**—No provision of this Act shall be construed as repealing any statutory provision now in force at the time of its passage with reference to the requirments governing the issuing of licenses to practice the healing art or any branch thereof; but any board authorized to issue licenses to practice the healing art or any branch thereof may in its discretion accept certificates issued by the board of examiners in the basic sciences in lieu of examing applicants in such sciences or may continue to examine applicants in such sciences as heretofore. The unconstitutionality of any part of this Act shall not be construed as invalidating any oother part thereof.

SECTION 19. **Short Title.**—This Act may be cited as "Basic Science Act, 1927."

SECTION 20. **Date of Taking Effect.**—This Act

shall take effect and be in force from and after its publication in the Statute Book.

FREE INSPECTION AND TREATMENT OF SCHOOL CHILDREN

The following bill has been introduced in both the House and Senate (House bill No. 44, Senate bill No. 40):

AN ACT to create and maintain free inspection and treatment for physical defects and ailments of public-school children by physicians and providing compensation therefor.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. That Boards of Education of cities of the first class are hereby authorized and permitted but are not required to provide free inspection and necessary treatment for defects or ailments discovered for all children in public schools of such cities, who are unable to pay the necessary expense for private treatment.

SECTION 2. That Boards of Education, who shall adopt the provisions of section 1 of this act, shall provide a place of inspection and designate some competent, licensed physicians or physicians to make such inspections and give such treatment or perform such operations as are necessary for the treatment or curing of defects or ailments discovered and such boards of education may fix compensation for such services, which sum may be paid out of the general fund of such board for the services rendered therein, and said board of education are hereby authorized to make all necessary rules and regulations for the proper conduct of such inspection and treatment and for carrying into effect all of the provisions of the preceding section, and furnish all necessary forms and blanks for the reports of such inspection and treatment.

SECTION 3. That a certificate of the result of such inspection, together with suggestions for the treatment or curing of any defects or ailments found, by operations or otherwise, shall be made by a physician making such inspection, in duplicate, one copy of same to be furnished to the cihld examined, the other to be filed with the clerk of the said board of education: **provided however,** That no inspection, treatment or operation shall be performed by the examing physician without the consent of the parents or guardian of the child.

SECTION 4. This act shall take effect from and after its publication in the official state paper.

This bill it is understood is intended particularly for the benefit of Wichita though it applies to all cities of the first class. If permission to use the school funds for this purpose in cities of the first class is legitimate, desirable and beneficial, one may suggest that it should apply to all school boards.

Apparently it was intended to restrict this free service to the school children of indigent parents, but technically the last clause in the first section might be interpreted otherwise. Public school children are themselves, as a rule, unable to pay for such services or any other services. They have no credit and no financial standing, cannot make contracts and cannot be sued. The question may also be raised if the treatment of the children of indigent parents should not be paid for by the county commissioners. The purposes of this bill are commendable and, with the text amended so that there will be no question as who shall be entitled to the free service, it should receive the support of the profession.

Note: Since this was written, an amendment has been made to this bill which provides that the boards of education shall determine if the school children to be treated are eligible for free treatment. This removes the ambiguity and the bill has already passed the Senate.

RELATING TO LOCAL HEALTH OFFICERS

The following bill (House bill No. 130) will be of interest to the profession in the State. It should add something to the efficiency of health officers.

An Act relating to local health officers, amending section 1 of chapter 202 of the Laws of 1925, and repealing said original section.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. That section 1 of chapter 202 of the Laws of 1925 be amended to read as follows: Section 1. That the county health officer in each county and the health officer of each local board of health throughout the state, immediately after his election, shall take the same oath of office prescribed by law for county officers, and shall give bond of five hundred dollars, conditioned for the faithful performance of his duty, to keep an accurate record of all the transactions of his office, and to turn over to his successor in office or to the county or local board of health selecting him, on the expiration of his term of office, all records, documents and other articles belonging to the office, and to faithfully account to said board and to the county and state for all moneys coming into his hands by virtue of his office. And he shall further notify the state board of health of the fact of his election and qualification, as herein provided for, and give his post office address. He shall receive and distribute without delay in the county for which he is appointed all forms from the state board of health to the rightful persons, all returns from physicians, assessors and local boards to the said state board of health, and shall keep an accurate record of all of the transactions of his office, and shall turn over all records and documents kept by him as herein provided and all other articles belonging to the office to his successor in office, or to the county or local board electing him, on the expiration of his term of office. **He shall, upon the opening of the fall term of school, make a sanitary inspection of each school building and grounds, and shall make such additional inspections as are necessary for the protection of the**

public health of the students of the school. He shall make a personal investigation of each case of smallpox, diphtheria, typhoid fever, scarlet fever, acute anterior poliomyelitis (infantile paralysis), epidemic cerebrospinal meningitis and such other acute infectious contagious or communicable diseases as may be required, and shall use all known measures to prevent their spread, and shall perform such other duties as this act, his local board, or the state board of health may require of him. He shall receive for his services such reasonable compensation as his board may allow, and with the approval of his local board of health may employ a skilled professional nurse, whenever he finds it necessary to have such assistance, and the local board of health for the county shall allow such nurse the sum of five dollars per day and her necessary transportation and incidental expenses while so employed, upon the approval of the same by the county health officer. The local board of health, whenever they deem it necessary for the protection of the public health, may employ additional personnel. All of said several sums allowed shall be paid out of the county treasury; and for any failure or neglect of said health officer to perform any of the duties prescribed in this act he may be removed from office by the state board of health as well as in the manner prescribed by the preceding section. And in addition to removal from office as provided herein, for any failure or neglect to perform any of the duties prescribed by this act, said county or local health officer shall **be deemed guilty of a misdemeanor** and, upon conviction, be fined not less than ten, nor more than one hundred dollars for each and every offense.

SECTION 2. That section 1 of chapter 202 of the Laws of 1925 be repealed.

SECTION 3. That this act shall take effect and be in force from and after its publication in the statute book.

NARCOTICS BILL

The following, which is House Bill No. 123, has been introduced. Apparently there is nothing objectionable in it since it is in harmony with federal regulations:

An act pertaining to opium and coca leaves and their derivatives, prohibiting the use, possession and sale thereof, and providing penalties for the violation of this act, and repealing sections 1 and 2 of chapter 210 of the Session Laws of 1921, and also repealing section 1 and 2 of chapter 136 of the Session Laws of 1923, and repealing sections 65-615 and 65-616 of the Revised Statutes of Kansas of 1923.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. That section 1 of chapter 136 of the Session Laws of 1923 and section 65-615 of the Revised Statutes of 1923 is hereby amended to read as follows: Section 1. It shall be unlawful for any person to keep or have in his possession or under his control, for personal use or otherwise, any opium or coca leaves or any compound, salt derivative or perparation thereof, and such possession or control shall be presumptive evidence of a violation of this section; or to permit another to have or keep or use any of said drugs on any premises owned or controlled by him, or to sell or give away or furnish any of said drugs to another, except physicians, dentists, veterinary surgeons, registered nurses, or registered pharmacists as hereinafter provided. Any person violating the provisions of this section shall be deemed guilty of a **felony and on conviction thereof shall be fined not less than $500 or more than $5,000 and shall be imprisoned not less than one year nor more than seven years in the penitentiary.**

SECTION 2. That section 2 of chapter 136 of the Laws of 1923 and section 65-616 of the Revised Statutes of Kansas of 1923 is hereby amended to read as follows: Sec. 2. That it shall be unlawful for any person to sell, barter, exchange or give away any of the aforesaid drugs, except in pursuance of a written order of the person to whom such article is sold, bartered, exchanged or given away, on a form to be issued on a blank for that purpose by the commissioner of internal revenue. Any person who shall accept any such order and in pursuance thereof shall sell, barter, exchange, or give away any of the aforesaid drugs, shall preserve such order for a period of two years in such a way as to be readily accessible to inspection by any officer, agent, or employee of the treasury department of the United States duly authorized for that purpose, and the state, county and city officials charged with the enforcement of this act. Every person who shall give an order as herein provided to any other person for any of the aforesaid drugs shall at or before the time of giving such order, make or cause to be made a duplicate therof on a form to be issued in blank for that purpose by the commissioner of internal revenue, and in case of the acceptance of such order shall preserve such duplicate for said period of two years in such a way as to be readily accessible to inspection by the officers, agents, employees and officials hereinbefore mentioned. Nothing contained in this section shall apply:

(a) To the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist or veterinary surgeon registered under the laws of the state of Kansas in the course of his professional practice only: **Provided,** That such physician, dentist, or veterinary surgeon shall keep a record of all such drugs dispensed or distributed, showing the amount dispensed or distributed, the date, and the name and address of the patient to whom such drugs are dispensed or distributed, except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend; and such record shall be kept for a period of two years from the date of dispensing or distributing such drugs, subject to inspection, as provided in this act.

(b) To the sale, dispensing or distribution of any of the aforesaid drugs by a registered pharmacist to a consumer under and in pursuance of a written prescription issued by a physician, dentist or veterinary surgeon registered under the laws of the state of Kansas: **Provided, however,** That such prescription shall be dated as of the day on which signed and shall be signed by the physician, dentist or veterinary surgeon who shall have issued the same: **And provided further,** That such registered pharmacist shall preserve such prescription for a period of two years from the day on which such prescription is filled in such a way as to be readily accessible to inspection by the officers, agents, employees, and any person violating the **provisions of this section shall be deemed guilty of a felony, and on conviction thereof, shall be fined not less than $500 nor more than $5,000 and imprisoned not less than one year nor more than seven years in the penitentiary.**

SECTION 3. **That sections 1 and 2 of chapter 210 of the Session Laws of Kansas for 1921, and**

sections 1 and 2 of chapter 65-615 and sections 65-616 of the Revised Statutes of Kansas for 1923 is hereby repealed.

SECTION 4. This act shall take effect and be enforced from and after its publication in the official state paper.

SCHEDULE OF PUBLIC LECTURES

The following is a schedule of lectures prepared by the Bureau of Public Relations.

They are intended for meetings of civic clubs and for public meetings, under the auspices of county societies.

They are all instructive and entertaining and the secretaries of county societies should have no difficulty in making satisfactory dates for them. Write to the Bureau of Public Relations of the Kansas Medical Society, 608 Kansas Avenue, Topeka, Kansas.

C. C. Nesselrode, M.D., Kansas City, Kans:
"The Relationships of Cancer to the Health Problems of Today."

E. D. Ebright, M.D., Wichita, Kansas:
"What Can Be Done for Crippled Children."

John A. Dillon, M.D., Larned, Kansas:
1. "High Blood Pressure (How Best Obtained.)"
2. "What Comes after Forty."
3. "Eugenic Dream."
4. "Idiots, Imbeciles and Criminals (How We Successfully Breed Them)"

J. T. Axtell, M.D., Newton, Kansas:
"Some Basic Principles of the Science of Medicine."

C. S. Kenney, M.D., Norton, Kansas:
1. "Heredity and Environment."
2. "Prolonging Life by the Administration of Science."
3. "The Kansas State Tuberculosis Sanitorium."

James W. May, M.D., Kansas City; Kansas:
"Defective Eyesight the Child's Handicap."

C. F. Nelson, M.D., University of Kansas, Lawrence:
"What is known about Cancer."

L. G. Allen, M.D., Kansas City, Kansas:
"What the X-Ray Shows"—illustrated.

CHIPS

At the annual meeting of the Kansas Medical Society, held in Atchison, in May, 1894, Dr. G. P. Marner of Marion read a paper on Myxedema and reported a case which he was treating with the oral administration of a dried extract of the thyroid gland. The treatment of myxedema with thyroid gland was very recent and it was a little more than a year before that that Mackenzie had reported good results from the oral administration of a dried powdered extract of the gland.

A letter received from Dr. Marner states that he has recently seen this patient who is now 70 years old and in good health. During the 32 years since the case was reported she has continued to take the thyroid extract regularly and finds it very necessary to her state of well being.

At a recent meeting of the British Medical Association, a full summary of the results to date was presented by members of the staff of the Liverpool Medical Research Organization. The clinical survey indicates that there is promise of therapeutic benefit in a few selected cases of otherwise hopeless cancer. The preliminary task before treatment can be begun is the selection of patients who may possibly obtain benefit. The lead suspension which Blair Bell uses contains fairly fine particles, some of which are metallic lead, and some lead hydroxide and lead carbonate. The mixture is more toxic than pure colloidal lead but it is also more effective in the destruction of tumors. Commercial products are not as yet available, but several laboratories in the country and in England are experimenting with various preparations, hoping soon to be able to develop a standardized and reliable product. It seems that Blair Bell has shown that when employed under cited limitations and by those who possess proper laboratory facilities and clinical experience, lead therapy offers to a small number of persons affected with inoperable tumors, a chance to escape the consequences of the disease. But before any widespread use can be made of the method, some means of removing lead from the body to control acute or chronic poisoning should be developed. The whole situation is thus frankly in the experimental stage. To carry out the treatment at all, requires hospitalization of the patient for some months, laboratory and clinical facilities not everywhere available and funds for frequent transfusions. It seems im-

probable that the method will ever replace surgery or compete with irradiation, but it has already accomplished something in patients in whom one or both of these procedures had failed. (Jr A.M.A. Jan. 8, '27.)

The intravenous injection of typhoid vaccine with initial dosage of 50 millions, each subsequent dose increased by 100 millions, and given at four day intervals, is one of the most reliable means of producing fever. It is a drastic measure and one should be certain that the patient's vital organs are sufficiently healthy to withstand the attacks of fever thus produced. The intramuscular injection of milk skimmed by centrifugalizing and sterilized by boiling in the water bath for ten minutes, has good pyrogenic properties without great toxicity. The usual dose is 5cc., gradually increased to 10 cc. With those who have a tendency to strong febrile reactions, small doses should be given at first. The injections must be adjusted to avoid severe reactions and anaphylactic shock. (Jr. A.M. A. Jan. 8, '27.)

In a summary of his paper published in the Archives of Surg., January, 1927, Mentzer states that there are probably two types and two sources of gallstone formation: (1) The bilirubin calcium stone containing little or no cholesterol and arising within the intra-hepatic ducts, and (2) the cholesterol stone containing varying degrees of cholesterol and arising within the gallbladder cavity. The essential factors in cholesterin stone formation are a disturbance of cholesterol metabolism of the body generally, or of the gallbladder wall locally, with a resultant increase of the cholesterol content of the bile the presence of o nucleus which may consist of a portion of cholesterol laden mucous membrane lying free in the gallbladder cavity; and a change in the reaction of the bile toward alkalinity.

Much of the literature on physical therapy has apparently been written with an eye to the royalty statement or the publicity returns rather than to the possibility of scientific criticism. These treatises become impressive, in size, at least, by the inclusion of statements on the physics of the apparatus culled almost in toto from the advertising and descriptive matter published by a manufacturer. This practice might be commendable if the physical concepts were not often wholly at variance with the concepts generally accepted by physicists. The physician who desires a substantial knowledge of phyical therapy must choose his source of information carefully. (Jr. A.M.A. Jan. 15, '27.)

Ones immuntiy or susceptibility to pulmonary tuberculosis depends upon whether he is a fat eater or is "fat shy" according to some investigations reported by W. B. Vaile in the London Lancet, January 8, 1927. These investigations were conducted in connection with his work as medical officer of a sanitarium for boys. Large families living in small houses were selected for study. He found that where tuberculois had once entered such a family, the immune and susceptible members of the family corresponded definitely with their fat eating or fat shy histories. He gives some tabulated reports that on their face seem convincing. He also claims that when tuberculosis first appeared in a member of one of these families if the other members were put on a uarge proportioned fat diet they escaped infection.

A good many years ago there was a popular belief that heavy meat eaters were more resistant to tuberculosis than light meat eaters. Further investigation may possibly develop some relationship between fat metabolism and resistance to tuberculosis.

Notwithstanding the fact that the Spahlinger treatment of tuberculosis was secret and that evidence in its favor had not been made generally available, Spahlinger and his friends have repeatedly attempted to secure government endorsement of the preparation in England and to secure funds for its development. Now the records of ten patients injectel by Spahlinger personally with this remedy have been reported by Dr. Thomas Nelson in the London Lancet. These records are decidedly unfavorable to the treatment. The evidence in favor of the Spahalinger method of treatment of tuberculosis is not sufficient at this time to warrant an extensive trial. The burden of proof is still on Spahlinger, who should at least show that in a considerable number of cases studied under controlled conditions the remedy will accomplish more than can be accomplished by the method of treatment now practiced in well regulated institutions for the treatment of tuberculosis. (Jr. A.M.A. Jan. 22, '27.)

Tisdale, Drake and Brown (Amer. Jr. Diseases of Children, December 1926) reported some experiments on carbohydrate

tolerance. They found that the subcutaneous administration of large doses of bacterial toxins and chemical toxins, and that rapid dehydration by the oral administration of magnesium sulphate, jalap and castor oil, to dogs definitely impaired the ability of the animal to remove injected glucose from the blood stream at the normal rate. This is not an effect of the substance given or the rapid dehydration but is due to a profound functional derangement of the cells called intoxication and may produce its effect by an increase in the glycogenolytic function of the body or an impairment of the ability to store carbohydrates. Elevation of temperature without any evidence of intoxication does not impair but apparently increases the ability of the animal to remove injected glucose from the blood stream.

From the spring of 1922 to the autumn of 1924, during a smallpox epidemic, there were approximately 40,000 compulsory vaccinations in the city of Berne, Switzerland. The health officer, Dr. A. Hauswirth, reported that on account of claims of the evil effects of vaccination a committee was appointed of which he was chairman, to investigate these charges. Only 14 cases were reported to the committee and of these there were only four in which a connection between the vaccination and the subsequent didease could not be definitely excluded. Of these four, one was a case of encephalitis lethargica, which developed shortly after the vaccination and which recovered. Three were fatal cases of septicemia, one following measles where the vaccination had been done during the incubation period. Another one in which a follicular tonsilitis occurred after the vaccination, and another who was vaccinated after recovery from an acute gastro-intestinal attack. Dr. Hauswirth advises that on the slightest suspicion of an acute infection or other acute disease, vaccination should not be done.

If primarily infectious lesions of the gallbladder occur they must be uncommon is the conclusion drawn by Denton (Arch. Surg. Jan. '27.) from a study of 403 cases in which a cholecystectomy had been performed. In none of these cases was it possible to demonstrate lesions that were primarily of bacterial origin. There were definite mechanical and curculatory effects. He thinks the terms acute, sub-acute and chronic cholecystitis are undesirable because they carry the implication of infectious origin and cannot be correlated with clinical conditions.

In an article on "The Diagnosis and Treatment of Syphilis of the Nervous System," by Edward Livingstone Hunt, that appeared in the American Journal of Syphilis, October 1926, the author points out that sufficient importance is not attached to the fact that syphilis of the nervous system is constitutional and that a patient with neurosyphilis has signs other than those of the central nervous system. The fact that many diagnoses are overlooked and go unrecorded is largely due to the physician and arises from his unwillingness to do a lumbar puncture. In addition to the usual neurologic conditions there are many little points about the patient's personal appearance which should be considered, as for instance, a syphilitic patient always looks and seems older than he really is; the teeth decay earlier and more often; the hair becomes gray sooner and they require glasses prematurely; the skin presents a prematurely old appearance; the eyes are watery and this is especially true in blondes and those possessing blue eyes; expression is anxious and hunted; the skin is pasty, the tongue coated and the breath foul. Serologically, the author states that it is not unusual to find the blood negative one day and positive the next. The use of Salvarsan, mercury and alcohol are factors which tend to change this Wassermann reaction. The author does not believe the gold test is as valuable in diagnosis as it is ordinarily thought to be. Treatment of neuro-syphilis should be: (1) specific, (2) non-pecific. The specific treatment of neurosyphilis is accomplished through the use of drugs—mercury, bismuth, salvarsan, tryparsamide and potassium iodide. The non-specific treatment of neuro-syphilis consists of the malaria treatment for general paresis. The most favorable cases for the malaria inoculation are the middle-aged partics who are in the early stages of the disease. The contraindications are obesity, cardiac degeneration, nephritis and old age. The consensus is that the malaria treatment of general paresis is humate but entails some risk. In treating neurosyphilitics there can be neither standard nor rule of procedure. It is not only the disease that is being treated but also the patient. Every case should be individually considered.

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The next annual meeting of the Kansas Medical Society will be held in Hutchinson, May 3, 4 and 5.

MINUTES OF THE COUNCIL MEETING

January 18, 1927

The annual mid-winter meeting of the Council was held in Kansas City, Kansas, on January 18, in the office of the secretary, Dr. J. F. Hassig, 804 Huron Bldg.

In the absence of the president, Dr. B. F. Morgan, the meeting was called to order by the vice-president, Dr. Earle G. Brown, at 10:30 a. m. Those present were Dr. Earle G. Brown, vice-president, Dr. F. A. Carmichael, past-president, Dr. George M. Gray, treasurer and Dr. J. F. Hassig, secretary and the following councilors: Dr. S. Murdock, Dr. L. B. Spake, Dr. P. S. Mitchell, Dr. O. P. Davis, Dr. J. T. Axtell, Dr. E. S. Edgerton, Dr. C. C. Stillman, Dr. Alfred O'Donnell, Dr. D. R. Stoner, Dr. C. H. Ewing, Dr. W. F. Fee and Dr. W. E. McVey, editor of the Journal.

On regularly made and seconded motion, Dr. Brown was made acting president during the disability of our president, Dr. Morgan. Dr. Brown made a short talk in which he expressed his sorrow for the illness of Dr. Morgan and the hope that he would soon be able to assume the duties of his office. He also emphasized the importance of getting all eligible doctors into the local societies. On Dr. Brown's suggestion Dr. McVey was instructed to write to Dr. Morgan, expressing the regret of the Council over his illness and his inability to attend the meeting and their wishes for a speedy recovery.

The Federal Lye Bill was endorsed and the secretary was instructed to wire our representative at Washington, Homer Hoch, urging his support of the bill.

It was decided that at our next annual session the Council should hold its meeting at noon of the first day, The House of Delegates, the night of the first day, and the Secretaries' meeting at noon of second day.

Dr. Carmichael and Dr. McVey made reports of the work done in the Bureau of Public Relations since its organization. Their reports of the their work were heartily indorsed by the Council and an expense bill of $292.18 was allowed. A motion was regularly made and seconded that an allowance not to exceed $1,000.00 until May, be made. The proposed bill by N. A. Turner, State Budget Director, to create a central office for professional and trades boards was discussed but on motion was not favored.

Dr. McVey, editor of the Journal made the following report for 1926:

JOURNAL STATEMENT

1926

Subscriptions—1500 Members		$3,000.00
Sales and Subscriptions		132.90
Advertising		4,121.87
Other Sources		10.00
		$7,264.77
Printing Journal	$2,231.50	
Stock and Stationery	742.10	
Salaries and Wages	2,330.00	
Postage	169.72	
Miscellaneous	239.10	
		$5,712.42
Net Earned		$1,552.35

RECEIPTS AND DISBURSEMENTS BY THE EDITOR

1926

Received:		
Advertising		$4,121.87
Sales and Subscriptions		132.90
Other Sources		10.00
Kansas Medical Society		1,800.00
		$6,064.77
Disbursed:		
Printing Journal	$2,231.50	
Stock and Stationery	742.10	
Salaries and Wages	2,330.00	
Postage	169.00	
Miscellaneous	239.00	
		$5,712.42
Balance		$ 352.35

Report accepted and placed on file.

The editor was complimented on the good showing he had made during the past year and he was unaminously re-elected for the coming year. A motion was regularly made and seconded that the editor's salary be increased $200.00, making it now $2,000.00 per year.

Motion made and carried that a committee of three be appointed by the chair to ascertain the number of doctors in the state who carry indemnity insurance. Dr. F. A. Carmichael, Dr. P. S. Mitchell, and Dr. C. C. Stillman were appointed.

A motion was made and carried that the Bureau of Public Relations be authorized to formulate necessary legislative bills and submit them to the Council for its approval before introducing them into the Leg-

islature; expenses to be taken from the Bureau Fund.

The following proposed changes were recommended in the Medical Act: There shall be two meetings each year instead of three; each member of Board shall receive $12.00 per diem instead of $6.00. There shall be a charge of $25.00 for examination instead of $15.00 as heretofore, and such other changes as Board of Registration and Examination shall see fit to make.

The secretary's expense account of $727.-91, incurred since the annual meeting, including stenographer's salary, stamps, supplies etc. was allowed.

The character of the program for our next annual meeting was discussed, and the secretary was instructed to arrange about the same kind of a program as we have had the past few years. Meeting Adjourned.

J. F. Hassig, Sec'y.

Committees of the State Society

The following committees have been appointed for the year by Dr. E. G. Brown, acting President:

Committee on Public Health and Education:

Walter A. Carr, M.D., Junction City, Chairman; H. E. Haskins, M.D., Kingman, J. E. Wolfe, M.D., Wichita, L. B. Gloyne, M.D., Kansas City, Geo. I. Thacher, M.D., Waterville, Earle G. Brown, M.D., Topeka.

Committee on Public Policy and Legislation:

W. S. Lindsay, M.D., Topeka, Chairman; C. S. Huffman, M.D., Columbus, J. T. Axtell, M.D., Newton, B. F. Morgan, M.D., Clay Center, President, ex-officio; J. F. Hassig, M.D., Kansas City, Secretary, ex-officio.

Committee on School of Medicine:

L. F. Barney, M.D., Kansas City, Chairman; E. D. Ebright, M.D., Wichita, J. T. Scott, M.D., St. John, Alfred O'Donnell, M. D., Ellsworth, L. G. Allen, M.D., Kansas City.

Committee on Hospital Survey:

Geo. M. Gray, M.D., Kansas City, Chairman; W. M. Mills, M.D., Topeka, W. J. Eilerts, Wichita.

Committee on Medical History:

W. E. McVey, M.D., Topeka, Chairman; W. S. Lindsay, M.D., Topeka, O. D. Walker, M.D., Salina.

Committee on Scientific Work:

J. F. Hassig, M.D., Kansas City, Chairman, C. A. Boyd, M.D., Hutchinson, H. T. Jones, M.D., Lawrence.

Committee on Neurology:

E. E. Ligggett, M.D., Oswego, Chairman; J. F. Hassig, M.D., Kansas City, W. E. McVey, Topeka.

DEATHS

Dr. Frenn Lesly Preston, Eldorado, aged 45, died Nov. 26, 1926, of endocarditis. He graduated from the Nortwestern University School of Medicine, Chicago, in 1911. He was a member of the Society.

Dr. Ira E. Sanderson, Pittsburg, aged 73, died Oct. 24, 1926, at Kansas City, Kansas, of uremia. He graduated from Missouri Eclectic Medical College, Kansas City, Mo., in 1898.

Dr. W. E. Carey, Nicodemus, aged 51, died recently. He graduated from Louisville National Medical College in 1905. He was formerly located at Russell Springs, and a member of Central Kansas Society.

Dr. J. M. Kemper, Alma, aged 69, died January 18, 1927, from heart disease. He graduated from Miami Medical College in 1882. He was for many years health officer of Wabaunsee county where he had practiced for forty years.

SOCIETIES

DOUGLAS COUNTY SOCIETY

The Douglas County Medical Society held its annual dinner meeting at the Elk's Home on January 6th, with 20 members, and 10 visitors present. After the dinner and regular meeting, the following officers were elected: J. R. Bechtel, Pres.; R. H. Edmiston, Vice Pres.; J. B. Henry, Sec.; E. M. Owen, Treas.; and H. L. Chambers, Censor and delegate to state meeting.

The paper of the evening was presented by Drs. A. J. Welsch and Albert Welsch of Kansas City, Missouri, on "Suppurative Pericarditis" with lantern slides. This paper was most instructive, and greatly enjoyed, and discussed freely. Douglas County has just closed one of its most profitable and best attended years. We are looking forward to as good, if not a better year.

J. B. Henry, Sec'y.

WILSON COUNTY SOCIETY.

The Wilson County Medical Society met at the Brown Hotel at Neodesha, Monday evening, January 10th. Those present: Drs. Young, Flack, Wiley, Duncan of Fredonia; Drs. Smith, Sharpe, Randal, McGuire of Neodesha; Dr. Addington, Altoona; Dr. Dewey, Buffalo. Dr. T. Blakeslee who came

to Wilson County before Neodesha was a town was a guest.

Dr. Young caused a communication from the State Board of Health to be read, stating that toxin-antitoxin for scarlet fever was not approved.

Final arrangements for the toxin-antitoxin clinic for diphtheria immunization were perfected. The County Commissioners furnishing the material, and the members of the County Society giving their services free.

With the cooperation of the newspapers of the county, a six weeks propaganda was carried out. January 22,clinic day, dawned, and it was a rotten dawn; cloudy, snowy, slick roads, cold, and yet we inoculated 801 children in the county as follows: Fredonia, 207; Neodecha, 250; Buffalo, 141; Altoona, 105; Benedict, 98; total, 801.

In view of the bad weather, we decided to have four clinic days, allowing those who wished to do so, to take the first dose Saturday, January 29th.

Bonds for new buildings at the County poor farm, voted on at a special election January 18th, were voted down; this proposition bad been sponsered by the County Society, but the farmers were adverse to voting more taxes.

Our next meeting to be held at Altoona in February.

E. C. Duncan, Secy.

MARSHALL COUNTY SOCIETY

The Marshall County Medical Society met at Marysville, December 7th, 1926. Dr. Rex. L. Dively of Kansas City, Mo., gave an interesting motion picture lecture, illustrating present diagnosis and management of acute infantile paralysis. In connection with the lecture a clinic was held, some of the doctors presenting patients having interesting conditions and diseases. A vote of thanks was given Dr. Dively for his splendid lecture.

The society lost the past year by death Doctors J. J. Brady and G. L. McGonigle, of Frankfort, and Jennie Eddy of Marysville.

The cociety voted to continue the officers of the society for another year; Dr. J. L. Hausman, president, and Dr. J. W. Randell, secretary.

The doctors of Marysville had a business meeting Tuesday evening, January 18, 1927. Special discussion on the low fee examination of the fraternal orders or societies, present fees of office and call work and methods to be adopted whereby we are better able to handle the patient who goes from one doctor to another without paying any of them.

Recommendations were made anlong the lines of giving better cooperation to our health offices in the management and control of contagious diseases.

J. W. Randell, Secy.

RENO COUNTY MEDICAL SOCIETY

The Reno County Medical Society held it's annual election of officers at a dinner session given at the Stamey Hotel, December 15, 1926.

The following officers were elected to serve during the year 1927:
President, Dr. Geo. E. Paine; Vice-President, Dr. Etta Mundell; Secretary, Dr. C. A. Boyd; Censors, Dr. Harry Blasdel and Dr. F. W. Koons; Delegates to the State Meeting, Dr. Irl Hemstid and Dr. Geo. E. Paine.

On January 20th the Society held its first meeting of the new year, at the Rorabaugh-Wiley Tea Room. Dinner was served at 6:30 p.m. and a program followed.

Dr. W. O. Quiring gave some of his observations relative to chronic otitis media, and Dr. Martin Dupray told us of some of the newer methods of laboratory technique.

The Society has purchased a new Baloptican which is aiding very materially in our scientific programs.

Plans are already being outlined for entertaing the State Society here next spring. We hope to have a record attendance.

C. A. Boyd, Secy.

FRANKLIN COUNTY SOCIETY

Thirty-two members of the Franklin County Medical Society, their laides and guests attended the 23rd annual banquet of the society at the Country Club January 26. In the absence of Dr. F. A. Carmichael of Osawatomie, toastmaster, Dr. J. R. Scott officiated in that capacity. The invocation was made by Dr. Warren P. Behan, and musical numbers were rendered by Mrs. Paul Goodman. The retiring president, Dr. H. W. Gilley delivered a very interesting address, in the course of which he related the high-light incidents of his 55 years of practice.

The address of the evening was delivered by Dr. Jabez N. Jackson of Kansas City, president of the American Medical Association. Dr. Jackson stressed the importance of the liver and its normal activities in controlling the healthful functioning of the

body. He classified it as the most important of the organs, comparing it to a test tube. In its complex operations there is chemical reaction of food products, and also a bacterial reaction that introduces another element, frequently resulting in poisonous combines. Normally the organ functions to store up food elements and as a filter to eliminate waste. Dr. Jackson emphasized the importance in cases of disease of speedily getting the patient in the best possible condition.

The new officers inducted into positions are: President, Dr. George W. Davis; vice-president, Dr. W. L. Speer, Osawatomie; secretary-treasurer, Dr. J. R. Scott.

The luncheon was an elaborate affair, with lavish decorations of ferns and carnations.

DICKINSON COUNTY SOCIETY

The regular meeting of the Dickinson County Society was held at Hotel Liggett in Herington, January 20.

The transfer card of Dr. J. J. Entz from Marion county was received.

Dr. Ralph Major gave a lecture, illustrated with lantern slides on Diabetes Mellitus with special reference to the treatment. Dr. Major was given a vote of thanks by the society.

A resolution was adopted endorsing the action of the Board of Regents and Chancellor of the University in regard to appropriations for the coming year. The society voted that copies be sent to members of the Senate and House of Representatives.

The invitation, to hold the next meeting at Enterprise, given by Dr. Kroesch was accepted.

L. A. O'Donnell, Secy.

MEDICAL SCHOOL NOTES

Dr. Richard L. Sutton was the guest of honor and the speaker at the combined meeting of the Detroit Dermatological and the Wayne County Medical Societies at Detroit on the evening of Thursday, December 16th, and at the Academy of Medicine, Cleveland, on December 17th.

Dr. Frank Teachener was re-elected Treasurer of the Western Surgical Association at its recent meeting.

Drs. A. L. Skoog and E. T. Gibson attended the meeting of the Central Neuropsychiatric Society at Cincinnati.

Dr. Thomas G. Orr read a paper on "Present Knowledge of Traumatic Shock" and Dr. Frank C. Neff read a paper on "The Treatment of Sepsis and Anemia in Children by the Transfusion of Blood," at the meeting of the Academy of Medicine, January 7th. These papers were discussed by Dr. Russel Haden.

Dr. Ralph H. Major read a paper before the Kansas City Academy of Medicine, December 17th, on "Etiology and Mechanism of Hypertension."

Dr. Roy F. Mills has recently been appointed Assistant in Medicine, in the Out Patient Department, at Bell Memorial Hospital.

Dr. N. F. Ockerblad read a paper on "Use of Ephedrin Sulphate in Spinal Anaesthesia" before the Academy of Medicine.

Dr. E. J. Curran read a paper on "Association Fiber Tracts in the Cerebrum" before the newly organized Neuropsychiatry Society of Kansas and Missouri at its first meeting. Dr. P. T. Bohan read a paper on "Impressions of Neuropsychiatric Clinics of Europe" at the above meeting. Dr. E. T. Gibson was elected Secretary of this Society.

Dr. H. R. Wahl is chairman of the committee preparing the Immunological Exhibit for the A. M. A. at Washington, D. C., for the coming annual meeting.

Drs. Thomas G. Orr and Russell Haden have moved to the Medical Arts Building in Kansas City, Missouri.

Dr. Edward Saylor was the guest of Dr. Claude Dixon, '21, who is first assistant to Dr. Chas. Mayo, while visiting at the Mayo Clinic.

Dr. P. M. Krall has been elected President of St. Margaret's Hospital Staff.

Dr. Russell L. Haden was recently elected President of the Bell Memorial Hospital Staff.

Dr. Schubert Henry '25 is the proud father of a baby boy. Dr. and Mrs. Carl Ferris '24 have a baby girl. Dr. and Mrs. J. E. Welker are the proud parents of twin girls, Nancy Ann and Susan Jane.

Dr. Albert S. Welch read a paper before the physicians of Wabash Valley at Paris, Illinois, December 28th, on the subject of

"Suppurative Pericarditis," with motion pictures.

Dr. Richard L. Sutton was the guest and speaker at the annual meeting of the Woodard County, Oklahoma, Medical Society at Woodard, on December 27th. He spoke at Supply, Oklahoma, on December 28th and was the guest at the annual meeting and banquet of the Clay County Medical Society, Liberty, Missouri, on December 30th.

BOOKS

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume VI, number VI, (New Jersey Number—December 1926.) 318 pages; 93 illustrations and complete Index to Volume VI. Per Clinic year (February, 1926 to December, 1926.) Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

The New Jersey number of the Surgical Clinics compares well with other numbers. Max Danzis reports an analysis of 215 cases of gall bladder disease, operation and end-results and presents several other interesting clinics. Rutherford shows some cases of epithelioma of the penis treated with colloidal lead and surgery. Robbins presents some perforations of gastric and duodenal ulcers and other cases. Haussling discusses painful shoulder. Hagerty gives some observations on goiter. Miner also presents some goiter cases. There are also clinics my Engleton, O'Crowley, Sprague, Orton and Barkhorn, Hawkes, Dieffenbach, Ill, Mecray, Lee, Shangler and Beisler, Darnall, Abrams and Greenfield.

A Manual of Pharmacology and its application to Therapeutics and Toxicology. By Thorald Sollmann, M.D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Third Edition; entirely reset. 1184 pages. Philadelphia and London: W. B. Saunders Company, 1926. Cloth, $7.50 net.

In the third edition of this work the text has been practically rewritten. The nomenclature and spelling have been changed to correspond with the United States Pharmacopoeia. The book was prepared especially for the student and the practitioner and for that reason the author has made a definite distinction in the text. The facts and explanations that have a bearing on medical practice are printed in ordinary type, while the data of less importance are printed in smaller type. Many new subjects have been added and much new matter concerning old subjects.

The Specialties in General Practice. Compiled by Francis W. Palfrey, M.D., Instructor in Medicine at Harvard University in collaboration with 14 other teachers of Harvard Medical School. Octavo of 748 pages. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $6.50 net.

The author has prepared the book for the purpose of assisting the general practitioner in dealing with the specialties. He has attempted to group diseases under the specialties to which they belong and to present the characteristic features of each with the ordinary methods of treatment. It is a very convenient reference book and should appeal particularly to the man who has a limited library.

Tiger Trails in Southern Asia by Richard L. Sutton, M.D., Fellow of the Royal Geographical Society, Professor of Dermatology in the University of Kansas. Published by the C. V. Mosby Company, St. Louis. Price $2.25.

This is a very interesting travel story but it is more than that for the author describes the country, its people and its birds and animals. Those who know Dr. Sutton personally, and those who know him by reputation as a dermatologist, appreciate the energy and ambition that has characterized his work in his chosen field. He shows the same energy and ambition in his play, if tramping the wilds of Africa and India in seach of big game can be called play. It is, at any rate, fascinating to the rest of us to read his description of these holidays or hear him tell of them.

The conquest of Disease, by Thurman B. Rice, A.M., M.D., assistant Professor of Sanitary Science, Indiana University, School of Medicine. Published by The Macmillan Company, New York.

The author has been stimulated to write this book by his conviction that the complete conquest of the transmissable diseases waits as much upon the intelligent appreciation of the facts by the laity as it does upon the advances in research made by the medical profession. He has endeavored to present,so that it will be intelligible to the lay reader, what is known about transmissable diseases and what can be done toward their prevention. The fact are presented in a very forceful yet interesting way and it should find an appreciative market.

Transfusion of Blood by Henry M. Feinblatt, M. D., assistant clinical Professor of Medicine in the Long Island College Hospital, etc. Published by the Macmillan Company, New York.

This book reviews the development of the practice of blood transfusion, discusses the physiologic consideration, blood groups, blood donors, indications for blood transfusion, its dangers and untoward results. Various methods, including the authors, for performing blood transfusion are described. The procedures are very nicely illustrated.

Fall Clinical Conference

The 1927 Assembly of the Interstate Postgraduate Medical Society of North America and the Annual Fall Conference of the Kansas City Southwest Clinical Society will be held in the New Ararat Shrine Temple, Eleventh and Central Streets, October 17 to 22, 1927, Kansas City, Missouri. Pre-Asembly Clinic of Greater Kansas City Hospitals, October 14 and 15.

Arrangements have now been completed for the greatest clinical meeting that has ever come to the Southwest. The new Shrine Temple offers a seating capacity of nearly four thousand with excellent acoustics and splendid platform arrangements.

There will be more than 35 diagnostic clinics conducted by the leading physicians of the world, together with 35 additional addresses. It will require at least 400 patients to visualize these diagnostic clinics. Behind the screen of the platform, there will be a modern hospital equipment and an ambulance service adequate to the situation.

The Pre-Assembly clinics upon the Friday and Saturday preceding the huge Postgraduate Assembly will be conducted at the allied hospitals of Greater Kansas City, throughout both days. Upon Friday evening there will be an informal smoker and upon Saturday there will be the usual attractive group of Alumni dinners.

The sessions of the Postgraduate Assembly will begin at 7 a.m. and continue until 11 p.m. daily, until the Friday night banquet. This is the most intensive constructed program of advanced medical and surgical thought that is offered anywhere in the world. The leading physicians and surgeons of the world are always obtained for the programs of clinics and discourses.

Watch for succeeding announcements and notices.

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Food and Drug Control

Twenty years of food and drug law enforcement have seen a gradual change in the attitude of the food industries from suspicion and positive enmity to cordial cooperation and enthusiastic assistance, declared Dr. P. B. Dunbar, assistant chief of the Bureau of Chemistry, United States Department of Agriculture, in an address given January 24 in Atlantic City at a convention of the National Canners' Association. "Food and drug inspectors," he said, "are no longer regarded as detectives or policemen, but as technicians who help manufacturers to produce legal and therefore marketable and profitable products.

"Officials whose duty is to enforce the food and drug law recognize," said Doctor Dunbar, "that American manufacturers of foods and drugs are almost universally committed to a policy of giving to the consumer an honest product conforming with every reasonable regulation, not only because it is the right thing to do but because it is the best business policy. They realize that the food and drugs act is designed to protect not only the consumer but legitimate industry, and that its broad purpose is corrective rather than punitive.

"In enforcing the law the Bureau of Chemistry proceeds on the theory that more is to be accomplished by demonstrating how the law may be complied with than by attempting to bring the greatest possible number of court actions. Where serious violations of the law occur, whether deliberate or the outcome of carelessness, there is no justification for refraining from punitive measures. But there are many minor violations, the result of ignorance or accident, that can be corrected with even greater promptness than by court action, by calling the attention of the manufacturer to the situation and requesting his co-operation in discontinuing the objectionable practice.

"No change in the policy of methods or enforcing the food and drugs act is involved in the plan recently announced by the Secretary of Agriculture for creating a new administration embracing the regulatory forces of the Bureau of Chemistry. The secretary's recommendation, which has been approved by Congress and by the President, provides for combining the activities of the present Bureau of Chemistry in enforcing the food and drugs act, the tea inspection act, and the naval stores act, with the work of the board which now enforces the insecticide and fungicide act. The new organization will be known as the Food, Drug and Insecticide Administration. Law enforcement policies, however, will remain unchanged. Any material change in the enforcement procedure would be disturbing to the industries affected, and would not give any compensating increase in the effectiveness of the law enforcement work.

"The laboratories of the Bureau of Chemistry, both in Washington and in the field, will operate under the new plan just as they have in the past, but under the Food, Drug and Insecticide Administration.

Present policies will be continued. The reorganization is simply designed to permit more effective operation on the part of various agencies of the department. I know that I can bespeak for the Food, Drug and Insecticide Administration the same support and cordial co-operation from members of the National Canners' Association and its allied associations that the Bureau of Chemistry has had in the past."

The next annual meeting of the Kansas Medical Society will be held in Hutchinson, May 3, 4 and 5.

Report of the Council on Physical Therapy

The Council on Physical Therapy of the American Medical Association, on the basis of the present available evidence, is convinced that the sale of generators of ultraviolet energy to the public for self-treatment is without justification. The Council bases its condemnation of the sale of such apparatus for this purpose on the following grounds:

1. The uninformed public could not take the proper precautions in administering treatments and, as a result, severe general burns or grave injury to the eyes might ensue.

2. Those not familiar with the possibilities of such apparatus would be led to place unwarranted confidence in the therapeutic value of such treatment by the claims that might be made in the literature advertising such generators, and to undertake to treat serious conditions not amenable to such treatment.

3. The unrestricted possession of such therapeutic means would tend to deprive people of expert diagnosis by encouraging them to make self-diagnoses.

4. Such practice would encourage the sale of useless and fraudulent lamps which would be advertised as generators of ultraviolet rays, since the public would have no means at its disposal to determine the quality or quantity of the radiant energy emitted by such lamps.

For the foregoing reasons, the Council on Physical Therapy considers as detrimental to public welfare the sale or the advertising for sale, directly to the public, of a generator of ultraviolet energy. Under rule 11 of its Official Rules, the Council will declare inadmissible for inclusion in its list of accepted devices for physical therapy apparatus manufactured by a firm whose policy is in this manner detrimental to public welfare.

The Control of Diphtheria

Notwithstanding the fact that the prevention of diphtheria is engaging the attention of city boards of health and private practictioners throughout the country, and many thousand immunizing treatments have already been given, it will be a long time, we fear, before diphtheria antitoxin goes out of use, or even before the need for it becomes appreciably less than it is now. Much more extended work along the line of prevention will have to be done than has as yet been done, before diphtheria disappears from the list of children's diseases.

The makers of Diphtheria Antitoxin, therefore, are to be commended for doing their utmost to improve the quality of the antitoxin and the syringe package in which it is put up. Parke, Davis & Co., who began supplying diphtheria antitoxin more than thirty years ago, announce some recent developments in the purification of this product and the concentration of the dose volume. See their advertisement in this issue, "Latest Refinements in Diphtheria Antitoxin."

Sterilization of Local and General Infections

Experimental and clinical evidence of results obtained by intravenous injection of mercurochrome-220 soluble in 173 cases are reported by Hugh H. Young, Baltimore (Jour. A. M. A., Oct. 23, 1926). He believes that it has been demonstrated conclusively that with mercurochrome he and his associates have shown in bacterial infections, local and general, what Ehrlich showed was possible with arsphenamine in spirochetal infections; an ability to "sterilize," "cure" or immediately improve the infection. As multiple and repeated doses are frequently necessary, Young proposes that instead of Ehrlich's "therapia sterilisans magna" it be termed a successful demonstration that curative " intravenous therapy" is an accomplished fact.

International Society for Crippled Children

The sixth annual convention of the International Society for Crippled Children will be held in Cincinnati, Februray 16 and 17, with headquarters at Hotel Sinton. The society was organized in 1921 at Elyria, and

through the program which has been carried out under its inspiration, there has been created an interest in the problem of reaching and helping the crippled child. Its general program this year looks toward coordination of efforts on the part of all organizations dealing with the cripple thruout North America.

"A National Program" will be the keynote of the convention. The opening session will be convened by Paul H. King of Detroit. President Edgar F. Allen, of Elyria, in his annual address, will summarize the progress of the society to date and he will present plans for the coming year. Dr. W. M. Auld, also of Elyria, will discuss the possibilities of a national program. Messages outlining progress in other countries will be read. Dr. Frank D. Dickson, of Kansas City, Mo., will speak on , "Our National Scheme" and Mrs. A. H. Reeve, of Philadelphia, on "The National Congress of Parents and Teachers and its Relation to the Crippled Children Movement."

The international officers are: Edgar F. Allen, Elyria, president; Paul H. King, Detroit and Ed. R. Kelsey, Toledo, vice presidents; H. E. Van de Walker, Ypsilanti, Mich., treasurer and Harry H. Howett, Elyria, secretary.

Affilaliated with the International organization are societies in England, Canada, and the following states: New Jersey, Colorado, Iowa, Connecticut, Rhode Island, Arkansas, New York, Pennsylvania, Virginia, West Virginia, Ohio, Michigan, Kentucky, Tennesee, Illinois, Kansas, Oklahoma, Nebraska, Wisconsin, Alabama, Minnesota, North Dakota, Californa, and Florida.

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Irritation Due to Insect Secretion

W. A. Hoffman, New York, (Jour. A. M. A, Jan. 15, 1927), discusses his experience with an insect which flew beneath his clothing and caused a burning sensation. Its cause proved to be a secretion exuded from two glands situated between the second and third pair of legs. The insect was identified as Loxa flavicollis. Experiments were then made with specimens of this insect for the purpose of demonstrating an apparently new means of irritation by insects.

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Intracutaneous Salt Solution Wheal Test

Walter G. Stern and Milton B. Cohen, Cleveland (Jour. A. M. A., Oct. 23, 1926), have performed the intracutaneous salt solution test as a routine on ninety-seven patients with symptoms suggesting circulatory disturbances in the extremities, with uniformly good and accurate results. In the presence of edema, which also reduces the absorption time, the test is not to be wholly relied on as a measure of arterial disturbance, but must be checked up by the oscillometer. Sixty minutes or more is the normal disappearance time of the salt solution. In all instances in which clinical circulatory deficiency exists, the disappearance time is diminished; in the area just above the seat of a gangrene (existing or threatened, it is frequently as low as five minutes.

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Paralysis of Right Diaphragm in New-Born Due to Phrenic Nerve Injury

James E. Dyson, Des Moines, Iowa (Jour. A. M., Jan. 8, 1927), reports a case of paralysis of the right leaf of the diaphragm due to accidental injury, perhaps section, of the right phrenic nerve in the neck during delivery. The infant's general condition was brought up to normal by improving the nutrition. An attempt at nerve repair was not advised. The patient made a complete recovery in six months.

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Has the Bacterium of Rheumatic Fever Been Discovered?

James Craig Small[3] of the bacteriologic laboratory of the Philadelphia General Hospital reports the discovery "of a streptococcus which has a specific immunologic identity; which has been isolated in the first instance from the blood of a patient suffering from rheumatic fever; which is capable of producing characteristic arthritic and cardiac pathology in rabbits, including Aschoff nodules; and with which a specific therapeutic serum may be prepared which is effective in terminating toxemia and other clinical manifestations in the patient suffering from acute rheumatic fever." The name Streptococcus cardioarthritidis is suggested for the bacterium in question. It is a coccus, forming short chains, that does not cause any laking or greenish coloration about colonies on plain agar with 5 per cent by volume of defibrinated horse blood. This failure to change blood agar is stated to be a chief characteristic, but more extensive studies with different kinds of blood agar and other blood mediums are indicated. Further evidence is not presented in this paper of the immunologic identity of this strep-

tococcus than that some thirty-one strains, isolated in most cases from the throat in acute rheumatic and other forms of arthritis, were agglutinated by the serum of a rabbit injected with the only culture from the fever; but a more detailed report will be blood of a patient with acute rheumatic made later. Five experiments on rabbits are recorded "with widely divergent results"; and the change in the joints and myocardium in some of these rabbits, including so-called Aschoff-like nodules, are not any more characteristic of acute rheumatic fever than those produced by other investigators with more or less similar streptococci. Nine patients have been treated with immune serum against Streptococcus cardioarthritidis. One of these patients received immune rabbit serum, the others immune horse serum. Two of the nine patients were found not to have rheumatic fever, but in the remaining seven "a very prompt improvement followed the injection of the serum in sufficient dosage." In view of the variable course of rheumatic fever, which is a self-limited disease, a reliable interpretation of the effects of the serum cannot be made on the basis of the facts at hand. This is recognized to a degree at least by Small himself when he says that careful control experiments on the response of acute rheumatic fever to nonspecific protein are necessary and that such tests are now under way. In conclusion, it must be said that the evidence presented so far does not justify claiming discovery of the cause of rheumatic fever. Further results will be awaited with keen interest, in the hope that in the end the present optimism of the Philadelphia investigator may prove to have been warranted.—Jour. A. M. A., Jan. 29, 1927.

3. Small, J. C.: The Bacterium Causing Rheumatic Fever, and a Preliminary Account of the Therapeutic Action of its Specific Anti-serum, Am. J. M. Sc. 173: 101 (Jan.) 1927.

Use of Radium in Internal Medicine

Radium chloride was given by Edgar V. Allen, Harry H. Bowing and Leonard G. Rowntree, Rochester, Minn. (Journal A. M. A., Jan. 15, 1927), thirty-seven times to twenty-two patients suffering from malignant hypertension. The condition of five of these was diagnosed malignant hypertension, and of seventeen, benign hypertension. Of the group of benign cases, nine were classified as mild and eight as severe. The dosage of radium chloride varied from 10 to 50 micrograms, intravenously, but 10 and 25 micrograms were most frequently used. Except in one case, it did not produce untoward results. In this instance sweats and diarrhea occurred, associated with dysuria, all of which disappeared in the course of two or three days. Sensations of bodily warmth, of flushed skin, and of somnolence for a day or two following the injection were common. The treatment did not yield sufficiently favorable results to encourage its further use. Following the injections, a transient fall of pressure was observed similar to that following the use of sodium nitrate or phenobarbital. In two cases there was a slight response, which persisted during the period of observation. Radium chloride was used intravenously to relieve pain 39 times in 28 cases. The response of pain of thrombo-angiitis obliterans, and to a less extent of diabetic neuritis, was gratifying. In a miscellaneous group, consisting of endarteritis obliterans, neuritis, arthritis, and pruritus vulvae, the relief was not sufficient to warrant further usage. The best results were obtained in the relief from pain in thrombo-angiitis obliterans, but even in this condition radium therapy has been replaced by treatment with nonspecific vaccines, which yield even greater relief. Hence the authors summarize their views as follows: 1. Radium chloride sometimes lowers blood pressure, occasionally quite markedly, but the same results can easily be obtained by other and simpler methods. 3. Radium chloride relieves pain, and the relief is occasionally marked; but the same results can usually be obtained by other and less expensive measures. 3. While qualitatively radium may relieve pain and reduce blood pressure, the results quantitatively usually fall far short of success. 4. The use of radium in these conditions is justifiable provided the commoner methods have failed, but even when so used the results have usually been disappointing in the end.

Studies in Tuberculosis

A biologic method has been devised by Frederick Eberson, San Francisco (Journal A. M. A., Jan. 29, 1927), for identifying skin-reacting substance in the blood serum of tuberculous patients and animals. A heat-sensitive skin-reacting substance of the nature of a toxin has been identifed in the blood serum of tuberculous patients and guinea pigs. It is not found in normal human or guinea-pig serum. The substance does not behave like tuberculin or its re-

lated elements which are heat-resistant, and it exists independently of these. It is present in largest amounts in far advanced tuberculous infections with profound toxemia, and is apparently destroyed by heating at from 60 to 65 C. for from twenty to forty-five minutes. In normal animals this unheated substance gives a positive skin test owing to its interaction with normal antibodies for tubercle products. The method devised for identifying this specific skin-reacting substance depends, in principle, on a living "indicator," the guinea-pig, which measures related or identical elements in the serum to be tested. The procdure was made possible by a previous demonstration that normal animals could be sensitized with fractional tuberculins prepared from nonprotein substrates. Skin reactions obtained according to the technic described in these experiments are referable to an addition or substraction of one or more of the interacting substances present in tuberculous serum and in the tissues of the experimental animal. The heat-labile substance, probably a toxin, in tuberculous serums can be used as a measure of the circulating antibodies in normal and tuberculous persons. A test of this type may serve as an index of the bodily resistance to tuberculous infection in both groups. Certain theories and hypotheses regarding tuberculin and skin sensitiveness find controllable experimental evidence in the observations described. An explanation is offered for negative tuberculin tests in far advanced tuberculosis, and, furthermore, positive reactions with tuberculous serums in apparently normal persons are to be attributed to a toxin. Accordingly, the results with the autoserum test of Lenz, with modified autoserum and with the Widbolz reactions take on a somewhat different interpretation.

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The next annual meeting of the Kansas Medical Society will be held in Hutchinson, May 3, 4 and 5.

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Nonspecific Protein Therapy in Treatment of General Paralysis

The difficulty involved in maintaining an available strain of tertain plasmodium, the mortality rate due to malarial treatment (from 8 to 12 per cent), and the similarity known to exist between the malarial paroxysms and the method of temperature regulation following the intravenous injection of proteose or typhoid vaccine, seem sufficiently significant to M. M. Kunde, George W. Hall and F. J. Gerty, Chicago (Journal A. M. A., Oct. 23, 1926), to warrant a thorough investigation of the effects on the clinical symptoms and serologic conditions of general paralysis resulting from a series of intravenous injections of foreign proteins. Twelve patients with advanced general paralysis have received (to date) thirteen intravenous injections of foreign proteins in quantities sufficient to produce a chill and fever which resembles the malarial paroxysm. The onset of the chill occurs from one-half to two hours after the injection, and lasts from fifteen to thirty minutes. The temperature reaches its maximum about four hours after the injection. The fastigium varies approximately from 102 to 104 F. Herpes has developed in four of the cases. Efforts are being made to graduate the dosage so that the fastigium of at least 103 F. may be reached after each injection. Studies of the leukocyte count confirmed the reports of previous workers; i. e., at first (at the onset of the chill) there is a leukopenia followed by a sharp rise, which may reach 30,000 per cubic millimeter from six to eight hours after the injection. The improvements in the clinical symptoms at the the present time are said to be sufficiently encouraging to warrant this preliminary report with the hope that it may be given proper consideration by others who are interested in the treatment of general paralysis.

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The Prevention and Treatment of Smallpox, Diphtheria and Scarlet Fever

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Read at the Annual Meeting of the Kansas Medical Society at Kansas City, May 4-6, 1926.

It is the purpose of this paper to discuss briefly, that part of the prevention and treatment of smallpox, diphtheria and scarlet fever, which is based on the use of certain biological products.

SMALLPOX

Jenner, in 1796, made his crucial experiments, which proved that smallpox could be absolutely prevented. It is one of the sad commentaries on the education of our general public, that we, after having had this knowledge for over a century, have failed to impress our people with the necessity of vaccination. During the last ten years (1915-1924), 27,910 persons in our own state of Kansas suffered from smallpox, because they failed to be vaccinated. During that same period 162 persons sacrificed their lives at the altar of foolishness, or ignorance, in our state, because they were not vaccinated.

The progressive states of the union do not allow children to attend school until they have been vaccinated against smallpox. Why has Kansas failed to so protect the health of its children? My answer is, because we have failed to educate our people as to the need of vaccination. This lack of education cannot be laid directly at the door of the school teacher, because he or she has not been supplied with the material to carry out such education. This can only be furnished when the preventive disease worker, and the school teacher get together on an educational program.

What school child is there that is given a real knowledge of the scourges of smallpox? Can we justly blame the child, or the parent if he shows lethargy, or even antagonism, to vaccination, if he has never seen a person sick with smallpox, or if we have not taught him what effect smallpox has had on the history of the world; how it has demoralized communities; killed over 30 per cent of its victims; disfigured millions for life, and caused an economic loss greater than our most expensive wars? We have pictures in our text books showing the brave warrior fighting to protect his country. In the same picture the wounded, and dead are shown lying on the battlefield. The youth is taught to dislike war, by giving a true picture of it, at the same time he is taught to be brave, and to be willing to fight, when his country calls him. Why not give him the same true picture of smallpox, and teach him, that anyone in a community, who fails or refuses to help in its defense by not being vaccinated, is a coward and a slacker?

The control of smallpox is found in one word, "vaccination." We have no reports on record where quarantine ever stopped an epidemic of smallpox, and I doubt if we ever will have. In fact, I have about reached the point where I believe, that it is not fair to those who have already been vaccinated, to spend public funds in maintaining a strict smallpox quarantine. In the light of present day knowledge, we would almost be justified in not quarantining the smallpox patient. Let those who do not want it, become vaccinated, but those who do, let them go ahead and have it, and get it over with.

There are one or two points about smallpox vaccination that need special emphasis. The first one is, that a single vaccination does not, in the vast majority of cases, give a complete immunity for a life time. The second point is, that the process of vaccination can be used just as accurately and scientifically, in determining whether or not a person has an immunity to smallpox, as can the Schick test in diphtheria, and the Dick test in scarlet fever. This immune reaction has been known for years. I believe that if it had a man's name attached to it, it would not be constantly overlooked by the majority of the profession. Because of the fact that Jenner gave us smallpox vaccination, and he apparently understood these immune reactions, I would suggest that we call this reaction the "Jenner Smallpox Immune Reaction,"

or for short, the "Jenner Test." It is quite discomforting for one in public health work to tell a party that they must be revaccinated, because of a previous unsuccessful attempt, and then have that party go to a physician, who attempts four, five, or even six times to vaccinate him without finding out if the party already has an immunity. The "Jenner Immune Reaction" will tell the doctor after the first vaccination whether or not a person has an immunity; or whether or not the vaccination virus is inert. If the patient has an immune reaction after the first vaccination, there is no need to spend any more time to vaccinate him, and there is no need to restrict him, if for instance, he is a contact to a case of smallpox, while additional vaccinations are being attempted.

When one is vaccinating with the idea of watching for a "Jenner Immune Reaction," it is best to scarify two separated areas, both of which should be very small, not larger than 3-16 of an inch in diameter. One will be used as a control, and no virus placed on it. Virus will be carefully rubbed into the other area. The two sites will be examined and compared at the end of about 48 to 72 hours. If a person has an active immunity, and if the virus is potent, then the area, which received the virus will show a definite inflammatory reaction. The site will be reddened, somewhat hardened, and one can definitely feel under the finger, the difference in the two areas, the control being smooth with no induration.

If the patient has a partial immunity from either a previous case of smallpox, or from a previous vaccination, then he will get an "accelerated take." The "accelerated take" goes thru all the stages that a primary take does, the only difference being, it is milder in its reaction, and it reaches its height on about the sixth or seventh day, while the primary take does not reach its height until about the twelfth day.

Just a word about the dressing on the vaccination. I have found that the patient will get by far the best results if no dressing whatever is put on. Next best results are obtained if only a loose gauze dressing is used, and by far the worst results are obtained if a celluloid shield is used. One must also keep in mind the recent reports of cases of tetanus following vaccination, where bunion plasters were used as a dressing. The bunion plasters were definitely shown to be contaminated.

Concerning infections into a vaccination wound, it can be definitely stated that the number of infections bears a definite ratio to the size of a vaccination. I believe that a primary vaccination the size of a silver quarter is very undesirable and a vaccination which approximates the size of a half dollar is absolutely inexcusable. If care is taken, the size will not be larger than the end of the little finger. Such a vaccination gives as much immunity as the larger ones. It causes the patient less discomfort, it is less disfiguring, much less apt to become infected, and causes much less opposition to vaccination.

As we have no biological products used in the treatment of smallpox, I will have nothing to state about the treatment of the case itself. I just want to emphasize careful vaccination of all contacts, and the use of the "Jenner Immune Reaction" in determining the immunity of those vaccinated, so that no one will be left in quarantine unduly.

DIPHTHERIA

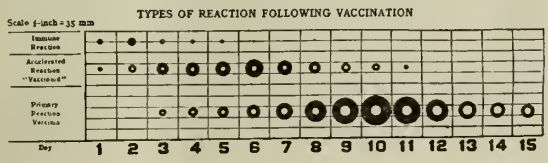
Since 1912, when a reliable immunization was worked out, diphtheria has been an entirely preventable disease. It can truly be said, that if all our people could be taught the simple, scientific facts now known about diphtheria, and the scientific recommendations carried out, diphtheria would be wiped off the face of the earth. The problems connected with the control of diphtheria are better known than are those of any other communicable disease. We know the organism which produces it; we can, by use of the Schick test, find out if a person has an immunity to it. If they fail to avail themselves of the immunization, and they develop it, we have a positive cure in antitoxin. We can locate carriers, i.e., persons who harbor the disease organisms, but do not have the clinical symptoms of the disease. In short, science has conquered diphtheria. It is now up to us to educate the masses so that they also will conquer the disease.

The control of diphtheria is also answered in one word—"immunization." A number of progressive communities have immunized all their school children, so that practically the only cases of diphtheria that have occurred in their community recently have been in the pre-school child and and in the adult.

Immunization against diphtheria has reached a place in its prevention where the physician must feel that he is definitely responsible to see that all his clientele is immunized. It must be kept in mind that

the greatest fatality from diphtheria comes in the pre-school child, so the child must be immunized long before he starts to school, if we are going to give him the most desired protection.

The Schick test is a very reliable test to determine if a person is susceptible to diphtheria, and is a very good test to use, for instance, in an institution when a case of diphtheria develops. However, I believe that running Schick tests in the pre-school child is still a debatable procedure. As such a large per cent are positive, it is a question as to whether or not the per cent of error in reading the tests would not do much more harm than to give a few toxin-



antitoxin, or "toxoid," who do not need it. One thing is certain, if there is danger of losing the patient before he makes four trips to you, you had better start immunizing him at the time of the first visit, especially if he is a young child.

The fact that we have allowed 29,713 persons, 2,059 of whom died, to have diphtheria in our own state in the last ten years, is a reflection which is bound to spur those of us who are really interested in its prevention on to greater action.

The treatment of diphtheria has become quite well standardized, but still there are a few points which may be discussed. The first one is, whether antitoxin should be given intramuscularly, or intravenously. It seems that the majority believe in giving it intramuscularly and repeat it once or twice, if necessary. Some give it day after day, as long as the patient does not seem to be getting along satisfactorily. In the most extreme example of this which I have seen, the child was given 180,000 units of antitoxin. Such a procedure is very questionable, as it is very doubtful if the diphtheria organisms could give off enough toxins in a few days to combine with that amount of antitoxin. On the other extreme should be cited the technique used by members of the staff of some New York hospitals. There the child is given 5,000 units intravenously at the time the diagnosis is made, and no more is given during the course of the disease. The theory being that 5,000 units are all that is necessary to neutralize all the toxin which will be formed during the attack.

The treatment of the contacts in the same family with a case of diphtheria offers a point for discussion. The majority of physicians apparently give antitoxin to all contacts, some give antitoxin to only the children contacts, and leave out the adults. This is bound, sooner or later, to cause the doctor some embarrassment by having an adult case develop in the family.

The other principle, which is recommended by some authorities, such as Rosenau is, do not give antitoxin to the contacts but rather start them on toxin-antitoxin, and inform the family that the contacts must be watched closely, and if they develop any symptoms of diphtheria, antitoxin should be given at once. The argument for such a system being that when antitoxin is given, the passive immunity resulting therefrom is of very short duration (about one month), whereas, if toxin-antitoxin is given, an active immunity which lasts for several years results. It is to be pointed out that the family is in a more receptive mood at the time of sickness and will usually complete their inoculations, if once started, whereas, if antitoxin is given with the idea of giving toxin-anti-toxin a little later the family puts it off indefinitely. One must keep in mind that if a contact is started with toxin-antitoxin and develops the disease before im-

	1st day	2nd day	3rd day	4th day	5th day	
SCHICK TEST	o	o	O	O	O	brown pigment 3 to 6 wks.
DICK TEST	o	O	O	O	o	slight brownish pigment
SERUM REACTION	o O	O	o	o		
NEGATIVE	o	o	o	o		

munity has been established, and then antitoxin is given, the effects of the toxin-antitoxin are neutralized, and one will have to start all over to give an active immunity. This is especially true if large doses of antitoxin were given early and the toxin thus neutralized without an active immunity being worked up.

SCARLET FEVER

Within the last three years, the causative organism of scarlet fever has been worked out. A test, called the Dick test, will show whether or not one has an immunity. While the work is still young, the health and educational authorities of New York City, for instance, have immunized thousands of children against scarlet fever, and they are satisfied that the immunization is becoming practical, and as

well standardized, as is the immunization against diphtheria. No doubt scarlet fever antitoxin will take its place alongside of diphtheria antitoxin in being one of the great remedial agencies discovered in the last few years.

Because of the fact that scarlet fever has been comparatively mild recently, and because of the fact that all the problems connected with immunization have not been entirely standardized, I would not recommend that a scarlet fever immunization campaign be put on in any community at this time, unless all the children have been vaccinated against smallpox, and immunized against diphtheria; or unless a severe type of the disease suddenly appeared in epidemic form.

I would recommend, however, that every physician be prepared to give the Dick test, and that he recommend scarlet fever immunization to all of his patients.

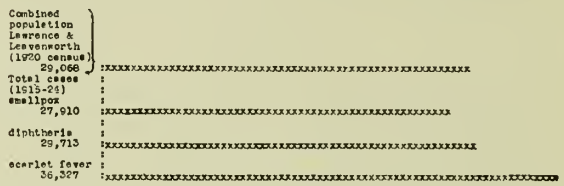
Scarlet fever has affected 36,327 persons and caused 648 deaths in the last ten years in Kansas.

Reports from all observations, as well as personal experience, would lead me to state that anyone treating scarlet fever at this time without the use of antitoxin is passing up the most valuable remedial agency which we have in preventing deaths, and in preventing the usual complications from scarlet fever. Briefly, scarlet fever antitoxin should be used very similarly to the way diphtheria antitoxin is used. As soon as the diagnosis is established it should be given. The size of the dose and the kind of antitoxin are still being debated somewhat. Apparently the best results are being obtained by giving the larger doses.

As to kinds, there are two most popular kinds of antitoxin on the market. One is the antitoxin made after the Dick method, which is made by injecting increasing sizes of doses of toxin into the horse. The material thus obtained is merely an antitoxin. It apparently is giving very satisfactory results. The other antitoxin is the one developed after the method of Dr. A. R. Dochez. In his method the horse is injected in addition to the toxin, with increasing sizes of doses of cultures of the scarlet fever streptococci. It is stated that this makes available to the animal undergoing immunization all the antigenic components of the specific scarlatinal streptococcus.

Only clinical experience over a period of time will tell which is the best to use. It can be definitely stated that either one will give satisfactory results. The doctor will save himself some embarrassment, and possibly trouble, if he will talk very frankly to the patient, or to the parents of the patient, before he gives the antitoxin. He should warn them that the patient will feel so much better, and the rash will clear up so promptly that they will be doubting the correctness of the diagnosis and will be wanting to get out of quarantine before the twenty-one days prescribed by the Kansas law, is up. If there is any doubt in the mind of the patient as to the diagnosis it is better to recommend consultation before the antitoxin is given, and thus avoid any controversy.

The antitoxin can be used on the contacts, but as it gives a passive immunity lasting only about two weeks, one must be very guarded about the promises made. Possibly the better procedure would be to start the contacts on toxin and keep them



under observation, and if any symptoms developed, give them antitoxin immediately.

There is one other use for scarlet fever antitoxin, which should be mentioned, and that is its use in aiding in the diagnosis of scarlet fever. A small amount is injected intracutaneously, and a blanched area around the site of injection appears, in a case of scarlet fever. If the rash is due to some other disease, no blanching takes place.

It is now known that the rash in scarlet fever is due to the action of the toxin, and not due to the bacteria themselves, and thus the scales from a case of scarlet fever are not infectious per se. One of the difficult problem in determining the dosage of scarlet fever toxin was to get a dose large enough to give an immunity but at the same time not cause the rash and other symptoms of scarlet fever in the more susceptible individuals.

With the knowledge now at hand, we are justified in concluding that the period of communicability of different cases varies greatly. Most of those cases which are given antitoxin become bacteria free sooner than those which are not. There are probably notable exceptions to this rule, as we probably have scarlet fever carriers, as well as diphtheria carriers. It is to be hoped

that laboratory methods will soon be worked out so that every person who has scarlet fever is not left in quarantine twenty-one days regardless of his condition, and is not kept out of school, if a school child, an additional two weeks. The scarlet fever quarantine is the longest and therefore one of the most difficult quarantines that we have to carry out.

CONCLUSION

In conclusion, it might be emphasized that the three diseases, which were discussed, but briefly and only in part, are entirely preventable, and no greater tribute could be paid to the phyiscians of this decade, than to let it go down in history, that it was in this period that the people were so well educated by the profession on the prevention of these diseases that they cooperated in putting on a program which wiped out smallpox, diphtheria and scarlet fever.

Tularemia

W. G. GILLETT, M.D., Wichita, Kansas

Read at the Annual Meeting of the Kansas Medical Society at Kansas City, May 4-6, 1926.

Tularemia is an infectious disease due to Bacterium Tularense and is transmitted to man by the bite of an infected insect or tick, or by lodgment on the body of blood or internal organs from an infected rodent, usually rabbits.

HISTORY

The first case records of what we now know to be Tularemia are those of Dr. Ancil Martin of Phoenix, Arizona. The disease was described by him in 1907 as rabbit septicemia. These cases had their origin in the eye. They followed the skinning of rabbits and the infection in all probability was planted on the conjunctiva by the patient rubbing his eye with an infected finger. These cases gave typical histories. Severe conjunctivitis with small white ulcers of the conjunctiva, enlarged pre-auricular, cervical and submaxillary glands, temperature 102-105, chills, malaise, weakness, etc., lasting over a period of weeks. Two of these cases still give a fairly high agglutination reaction for bacillus tularensis.

The disease has been known in Utah since 1911 under the name of Deer-Fly Fever. Mayne and Francis in 1919-1920 proved that the deer-fly transmitted the disease, and that the causative organism was bacillus tularensis.

Market men who handle large numbers of rabbits have described the disease as rabbit fever.

In Idaho the disease was for years known as the glandular type of tick fever and Spencer and Francis demonstrated bacillus tularensis infection in the common wood tick found there. They also demonstrated it in ticks from the snow-shoe rabbit, horse, mountain goat, woodchuck and mountain rat. The organism, bacterium tularense, was isolate from plague infected ground squirrels in Tulare County, California, in 1911 by McCoy and he gave it the name Bacillus Tularensis from the County in which it was found. The organism was not demonstrated in the human until Vails case was published in 1914.

Tularemia has been known for only the last fifteen years and is one of the very few diseases that has been described and investigated entirely by American physicians.

SYMPTOMS

Tularemia may be classified symptomatically under two headings. The glandular type and the typhoid type. The symptoms and course are the same in both instances, the difference being that in the typhoid type there is no evidence of a primary lesion and no glandular enlargement.

The incubation period of tularemia is from two to nine days. The onset is sudden with headache, chills, high fever, bodily pains, vomiting, prostration and sometimes delirium. In cases where the infection has been introduced by fly bites, tick bites or through handling infected rabbits, the patient complains within twenty-four to forty-eight hours of pain, tenderness and enlargement of the lymph glands regional to the site of infection. The enlarged and painful glands precedes by about twelve to twenty-four hours any definite changes in the skin where the infection entered. This area, however, soon becomes red and painful and shows a small red pimple which rapidly breaks down and sloughs leaving a small punched out necrotic ulcer.

The above acute symptoms last from two to four weeks, following which there is a period of fatigue and prostration lasting three weeks or more. During this time the swollen glands may or may not break down and have to be drained. There is usually some evidence of glandular enlargement weeks after the patient has returned to work. Not uncommonly the primary site of infection is in the eye and when this is

the case a very severe form of conjunctivitis results. The lids are greatly swollen and conjunctival ulcers form on their under surface. Abscess of the lids and tear sac are frequent complications. Corneal ulcer with loss of sight has been reported. The systemic symptoms the the same no matter where the primary lesion is located. A number of fatal cases have been reported.

LABORATORY TESTS

Bacterium tularense is a rod shaped organism three to seven microns in length and two microns wide. In the body tissues it seems to be encapsulated. It is very hard to grow on most artificial media, coagulated egg albumen being the most satisfactory. Grown on this media it assumes many involution forms, some of which are quite characteristic.

The blood serum of a patient with tularemia agglutinates bacterium tularense the same as the serum of a typhoid patient agglutinates bacillus typhosis. During the first week of the disease agglutinins are absent from the blood but after this time the test becomes positive and the agglutinins gradually increase, reaching their maximum at the end of the fourth week. This test is positive years after the patient has had the disease.

Pus, secretions or curettement from the ulcers injected subcutaneously into the abdomen of guinea-pigs or rabbits will practically always produce tularemia in these rodents. Pus from the broken down glands if injected similarly will in most cases reproduce the disease, but this is not always true as repeated injections in my case failed and similar cases are recorded even when the agglutinins were high and the clinical course unmistakable Pure cultures of bacterium tularense may be obtained by inoculation from the blood, spleen, lungs or liver of the dead animals to coagulated egg yolk. The blood counts in tularemia are as a rule within normal limits but there may be a slight leucocytosis.

DIAGNOSIS

The diagnosis of tularemia offers little difficulty if one is at all familiar with the disease. The sudden onset with high fever, enlarged glands and ulcer of the skin or conjunctiva offers a syndrome not found in any of the more common infectious diseases. Glandular farcy, anthrax and typhoid fever have been mistaken for tularemia but only when a knowledge of the disease was lacking or before sufficient laboratory tests had been made.

TREATMENT

The disease is self limited and treatment is purely symptomatic. The glands should not be drained until there is definite fluctuation and pointing. When the disease has its origin in the eye, local antiseptics are of course beneficial. There have been three cases in which there seemed to be a primary bilateral conjunctival infection and these cases died promptly regardless of any therapeutic measures.

CASE HISTORY

Patient: C. I., Augusta, Kansas, age 15.

Present Illness: On Oct. 15, 1925, five days after he had skinned and dressed three or four cotton tail rabbits he noticed that his right eye was red and the lid swollen, that he felt tired out and chilly. When he awoke the next morning he was quite sick, had chills, severe headache and backache, wasslightly nauseated and very weak. The lids of his right eye were swollen shut and there was a sticky discharge. Large and tender lumps appeared in front of his right ear and along the right side of his neck and jaw. On the 19th he consulted his family physician who gave him some drops for his eye but did not do a complete physical examination or take his temperature. He returned home and remained in bed until he came to our office Oct. 22, 1925. At this time he showed the following: Temperature 102, severe conjunctivitis in right eye with four small white punched out necrotic ulcers on the right upper lid and three on the right lower. Very marked enlargement of the pre-auricular cervical and submaxillary glands. For ten days his high fever (101-104), systemic symptoms and conjunctivitis persisted, after which the general symptoms and conjunctivitis slowly abated but the glands went on to suppuration and were drained.

The physical examination except for the above was entirely negative.

Blood counts were within normal limits.

Wassermann was negative.

Urine examination was negative.

On several occasions pus was aspirated from the broken down glands and injected either subcutaneously or intraperitoneally into guinea pigs but with negative results.

After the first ten days of the disease blood forwarded to the United States Hygienic Laboratory, Washington, D. C., agglutinated bacterium tularense in dilutions 1:10 and 1:20. A week later it was posi-

tive 1:40 and 1:80. A week later positive 1:160 and at the starting of the fifth week of the disease was positive in dilutions of 1:320. This gradual increase in the agglutinins of the blood is according to Francis, characteristic of the disease.

PRESIDENT'S ADDRESS

Kansas Medical Auxiliary, May, 1926, Kansas City, Kansas

MRS. JONATHAN B. CARTER, President

Members of the Kansas Medical Auxiliary and friends:

One year ago the Kansas Medical Auxiliary was organized in Topeka, Kansas, and when you elected me your president I hesitated to accept the office, but today I am proud of this great honor you conferred upon me, of making me your first State President of one of the finest organizations and one of great potential power. While I appreciate the honor I also appreciate your faith and confidence in me.

With the splendid work and co-operation of the officers and the councilors the work has progressed and much interest is shown.

Our work is only visionary as yet, but our potential membership is large and with the help of our 120 charter members our visions will soon become realities.

"Far away there in the sunshine are my highest aspirations, I cannot reach them, but I can look up and see their beauty," believe in them and try to follow where they lead.

There is a tie that binds us together like a fraternal organization, the common interest of a large group of women whose menfolk speak a dialect foreign to others, contain such terms as: "temperature, fractures, hemoglobin, scar tissue, contagious" and many others with which all of you are familiar.

We are divided because of the varying elements that enter into our environments, into the city and country doctors' lives.

I know that the day you have set apart for a long looked for vacation is the one some of your husband's most faithful patrons become ill and your plans are set aside until some future time which perhaps never materializes, and when you have guests invited for dinner your husband is called to the country or distant city. But while I know more about the country doctor's wife than the others, my greetings and messages are to you all.

My greetings are cordial and wholehearted, my message is that it is the duty of every wife to know something concerning her husband's business and to co-operate with her husband, but not in his private work because we have not been trained professionally. Perhaps the less we know about the details of our husbands' strictly profesional affairs the better it will be for for them and for us. But we can help the medical profession as a whole in many ways. To me there is no nobler profession than that of the physician. We want to help, but in our work we must be sure that we shall have the approval of the organized profession. For that reason the Kansas Medical Auxiliary should not take the initiative in any program but work with and for the Kansas Medical Society.

Before we work for proposed legislation we must know whether the house of delegates has or has not endorsed the legislation under consideration.

The wonderful opportunities for service of the Kansas Woman's Auxiliary must be realized by all of us, when we think of what the wives and mothers of the Kansas Medical Society can accomplish if properly organized.

We have for our inspiration the history of the Kansas Medical Society and of the American Medical Association.

Think how much better our country must be, having the altruistic medical profession of the greatest country in the world, working together to alleviate the suffering of mankind, than it would be with unorganized doctors, each working out his individual problems and often for selfish purposes.

The greatest accomplishments of the Kansas Medical Society have been within the memory of the husbands of most of us here. It had a humble beginning just as all great organizations have had, but by slow and careful growth great things have been accomplished.

We shall not have the long time struggle of growing into a strong, powerful organization that the Kansas Medical Society had however, because we can build upon the foundation laid by the medical pioneers who had the vision to organize the Kansas Medical Society on its present plans and we are a part of the great National Auxiliary of the A. M. A. which has been organized four years.

We have but to follow the leaders of the Kansas Medical Society to develop into a great state organization, one that will be helpful to our husbands, one that will exert beneficient influence in the welfare of mankind.

Mrs. S. C. Red of Houston, Texas, has the honor of being the mother of the Woman's Auxiliary of the American Medical Association. She is the mother of 8 children and the wife of a distinguished busy physician, but found time to organize the Auxiliary of the A. M. A. If all or even half the women here today will agree to devote one or two hours a week in the effort to build up the Kansas Medical Auxiliary we shall be able to report wonderful progress next year and because of the pleasure that comes from "work well done" we shall enjoy our 1927 meeting in a delightful way.

The Kansas Medical Women's Auxiliary is a social but not a society organization.

While the social feature of doctor's wives and mothers coming together and knowing each other better is an important factor, every doctor's wife and mother, whether rich or poor, should be made to feel that she can have an important place in our work if she makes the effort to become a useful member in genuine unselfish effort, to make life easier for the doctors and to make living conditions better for all the people in her community.

Whatever helps to make life better for even a few persons tends toward the uplifting of the whole people.

We enjoy hearing of the great work of the medical profession and the doctors deserve all the praise that is accorded them, but I cannot refrain from saying a word of praise for the doctor's wife.

It is she who makes his home life a joy, she who encourages him, shares his pleasures and sorrows, she who cares for his children, the delight of his soul, she who anwers the telephone many times every day, makes his engagements or presents his apologies for engagements that he cannot meet. She toils and economizes that her husband may become independent financially or that he may attend medical conventions or take post-graduate work.

The doctor's wife is to her husband as Longfellow's Minnehaha to Hiawatha.

> "As unto the bow the cord is,
> So unto a man is woman:
> Though she bends him she obeys him,
> Though she draws him, yet she follows
> Useless each without the other."

Perhaps the greatest opportunity for service of the doctor's wife outside her home is to take part in the public welfare program.

It was Disraeli, England's great statesman, who said, when he was urging his people to look to better living conditions: "Public health is the foundation upon which rests the happiness of the people and the welfare of the state."

Reform directed toward the advancement of Public Health must take precedence of all others.

We must study health conditions in community and state and aid in educating the people regarding the wisdom of the program for disease prevention.

The Women's Auxiliary offers to the doctor's wife and mother an opportunity for service that is denied the women of every other class, and surely she will measure up to her obligation.

The prosperity of a nation depends upon the health and morals of its citizens.

Henry Drummond says "The greatest thing a man can do for his Heavenly Father is to be kind to some of His other children."

A Helpful Adjunct in the Treatment of Appendicitis

E. M. Miers, M.D., Kansas City, Mo.

Since the beginning of abdominal surgery, physicians have been trying to reduce their mortality and better serve those acutely sick. The mortality of appendicitis, on the whole, has been about the same for the past fifteen years; some years lower and again in others higher; with all kinds of surgery and surgeons, hospitals and home operations, from watchful waiting to immediate operation as soon as the patient is seen by the surgeon.

In the beginning may I disabuse your mind of the idea that I have any new, sure, or positive method of reducing mortality. But rather the application of another step in drainage, namely, drainage of the intestine proper. The acutely sick patient with appendicitis with free pus or fluid in the abdomen presents an alarming picture demanding drastic measures for its relief. The belly is hard and distended, normal peristaltic wave inhibited by an inflammatory plug at the terminal end of the ileum or possibly a septic paralysis involving a more extensive area if the pus is not well walled off. With this already inflamed, distended edematous, septic gut, one does not improve the immediate condition by the removal of the appendix, but rather adds fuel to the fire, by the trauma incident to the removal of same. The patient becomes more distended, rigidity more general, pain very severe and if these conditions cannot be relieved there is soon an embarrassment

of respiration and circulation followed by prostration and death.

How quickly the picture changes in most cases if there is a blow-out of the intestine with the formation of a fecal fistula, allowing the distension to subside and the bowel content to be liberated; thus allowing the patient to take nourishment and rehabilitate his devitalized forces and bring his blood chemistry back to normal.

In the past 31 cases of suppurative appendicitis the following procedure has been adopted as a routine. Abdomen opened; appendix removed and a catheter inserted into the bowel through the stump of the appendix and brought out thru the abdomen, thus immediately establishing an artificial opening or a handmade fistula to allow the accumulated flatus and liquid bowel content to escape. A catheter as large as the stump of the appendix will admit is threaded through into the bowel, fastened by two small cat gut sutures and a purse-string about the stump and the same inverted in much the same manner as one would invert a gall bladder drainage tube. In a few days additional protective adhesions will well wall off this stump and tube from the general peritoneal cavity. The tube usually comes away on the sixth or seventh day and the fistula closes promptly. The shortest time until no fecal drainage appeared in the dressings was three days after the tube came out, and the longest time was twenty-seven days. The youngest patient operated by this method was two years and three months and the oldest 56 years old. Two died.

The first mortality, 17 years old, had been sick for two weeks, had a large mass in the right side extending down into the pelvis. Pulse 130; temperature 99 degrees; respiration 26. Faint ring of albumen, leukocyte count 26,000 and creatinin 7.6 per cent, otherwise laboratory findings negative. Chest negative; abdomen very hard, slight distention, no nausea or vomiting. Had a severe attack of tonsilitis just prior to the attack of appendicitis, in fact throat was still very red, pus could be expressed from right tonsil. On entering hospital, abdomen was infiltrated with novocain, gas anesthesia was given, large abscess opened, appendix had sluffed off. One drainage tube was inserted in pelvis and one in back. Catheter into bowel. Much gas and considerable bowel content escaped through catheter. Twelve hours after operation temperature was 102.5 degrees. Bi-lateral phlebitis twenty-four hours after -operation; temperature 105.3 degrees. Pulse could not be counted. Patient died 72 hours after operation.

Second mortality. Patient 52 years old died of ether pneumonia.

This treatment in no way interferes with whatever other procedure best suits the fancy of the surgeon such as drainage, kinds and number. In all the cases patients received the general supportive treatment such as fluids under the skin or intravenous, in large quantities, as well as hot packs and enough morphine to insure sleep, rest, and to steady the pulse. There was a surprisingly small amount of nausea and vomiting in any of these cases.

Epilepsy and the Ductless Glands

V. E. LAWRENCE, M.D., Ottawa, Kansas

It is now some ten to fifteen years since the medical journals began to call the attention of the profession to the therapeutic values of the ductless glands. This was followed in 1922 by Dr. C. E. Sajous' "Internal Secretions and the Principles of Medicine" in two elaborate volumes, comprising some 1800 pages. Dr. Sajous has been for almost a half century a professor in the University of Pennsylvania and is one of the best known scientists in the medical profession.

During the same year Dr. Henry R. Harrower's "Practical Organotherapy" appeared in some 400 pages. Both give comprehensive information regarding the subject under consideration. Although without a modern medical dictionary it is scarcely possible to comprehend the author's statements regarding this intricate subject, the doctor is fully repaid for the effort.

With this short preface permit me to give the history of the following case which fell into my hands some three years ago.

A young farmer aged twenty-eight years became ill with cerebro-spinal meningitis, which gradually developed within the next two weeks into a dangerous and almost fatal condition, but which gradually resulted in apparently complete recovery. This continued for some twelve months, when without premonition, he was attacked with Jacksonian epilepsy. For some six months these attacks occurred about weekly. The usual sedatives had but little effect.

During the past few years the medical journals have made mention of the use of

the endocrines as beneficial in cases of epilepsy, but with uncertain results. I determined to prescribe the above mentioned remedy in this case and began with desicated thyroid extract tablets, one grain three times daily, to be increased to two or three grains three times daily. For a time, to allay cerebral irritation, two drachms elixir stronchium bromide were given upon retiring. The bowels were kept normally active and a diet advised, including milk and fruits, but no coffee or tea. Let me say just here that the calcium compounds often greatly aid the thyroid extracts. Later, hormotone tablets, one at noon after meals, were added. The heart occasionally responded rather too actively to the thyroid tablets as prescribed above and the dose was correspondingly reduced. The patient was taught to count his own pulse. The case promptly responded to this treatment and the epileptic attacks soon disappeared. The dose was then gradually diminished to about one-half when there was another slight attack. About two-thirds of the original dose was then given.

My patient purchased a farm in an adjoining state in December, 1925, over two years after I had first taken the case. He continued the treatment for two months and had only one slight attack, probably due to the work of moving and getting started in a new place. Yesterday, January 30, 1927, I receeived a letter stating that he had taken no more medicine and had had no more attacks, was in good health, had gained ten pounds and was able to perform all the usual work of a farmer. This condition maintained eleven months after discontinuing the use of the endocrines.

It should be remembered that in severe attacks of cerebro-spinal meningitis sufficient autointoxication may develop to become the cause of the epilepsy and the doing away with this condition by the thyroids may result in the disappearance of the epilepsy. This case, it seems to me, is of more than usual interest.

The Mayo Clinics write that they are presenting the case and treatment to their neurological clinic.

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The next annual meeting of the Western Physiotherapy Association will be held at the New President Hotel, Kansas City, Missouri, April 4 to 9. An elaborate exhibit will be an interesting feature. A number of prominent men are scheduled to appear on the program of this meeting.

KANSAS STATE MEDICAL LABORATORY ASSOCIATION

Notes on the Widal Test

C. M. Downs
Department of Bacteriology, University of Kansas, Lawrence

Although the Widal test has been superseded to a certain extent by blood cultures for the early diagnosis of typhoid, yet it still holds a definite place among useful laboratory tests. It is simple, fairly reliable and a test that is frequently required from any laboratory. In a recent paper in this column Dr. Sherwood[1] has called attention to the value of Widals in the diagnosis of typhoid fever and their interpretation. The technical points here discussed are based on observations reported by the author[2] from this laboratory.

The main factors to be considered from the technical side are the following: 1. the patient's serum; 2. The salt solution; 3. the emulsion of organisms.

PATIENT'S SERUM

As a rule this is received by the laboratory in drops of dried blood on paper, glass slides or sometimes even bits of wood or metal. Sometimes the technician may collect the material herself, and in this case blood may be drawn up to the one mark in a white cell counting pipette and distilled water used as a diluent to the ten mark. By this means one has a dilution of 1-10 and when the organisms are added sufficient salt solution is present to overcome the lack of salt in the original dilution. From this 1-10 dilution the proper dilutions can easily be made. Probably the most satisfactory method of all is the use of clear serum drawn from the clot. Enough blood may be obtained very easily from the finger or ear, and even in those cases where the blood must be sent out of town to a laboratory by the doctor it can be done very easily by sending the clot in a small corked tube. When dried blood is used it is necessary to estimate the number of drops of serum in the amount received and then add sufficient saline to make 1-10 dilution. The dried material must then be extracted at room temperature for one-half hour or longer. It may be necessary to centrifuge the extract to rid it of bits of paper, cell debris, etc. Dilutions of 1-20; 1-40 and 1-80 should be made to remove the possibility of error from the presence of normal agglutinins. These dilutions seem to be sufficient to overcome any zone

effect which may be present in a serum which contains a high titer of agglutinins. When these dilutions are placed in tubes and an equal quantity of organisms added the dilution of the serum is doubled, giving one an ultimate dilution of 1-40; 1-80; 1-160. Either a microscopic or macroscopic Widal may be run with these dilutions but in our opinion the macroscopic Widal is much less subject to error than is the microscopic.

SALT

There is one main precaution to be mentioned in the use of salt solution in the Widal test. Although the reaction takes place thru a wide range of hydrogen-ion concentration if the salt solution is too acid there is a tendency to spentaneous agglutination and if it is too alkaline there may be inhibition of agglutination. The reaction should be neutral to litmus or to phenol red. It is always necessary to set up a tube control which contains the suspension of organism and an equal quantity of saline instead of serum in order to guard against the error of spontaneous agglutination.

ORGANISM

It has been customary to use fresh 24-hour suspensions of typhoid, para A and para B for the microscopic and macroscopic Widal. Since it is not always possible to have a 24-hour culture on hand this necessitates the delay of 24 hours while waiting for the growth of a culture. The use of formalized cultures of typhoid and paratyphoid proved very satisfactory in our hands and has much to recommend it. It is perfectly satisfactory for use in the microscopic test as well as in the macroscopic test. In the microscopic test, using dead cultures, of course no motility is present but the clumping of the organisms which result in clearing the field is recognized as characteristic agglutination. To prepare formalized cultures the organism is grown on agar slants or plates and after 24 hours incubation the growth is washed off with normal saline and 0.2 cc of 40% formaldehyde is added to each 10 cc of the fluid and the suspension is placed in a water bath at 56 degrees for thirty minutes. A suspension of typhoid bacillus, paratyphoid A and paratyphoid B may thus be kept on hand for running Widals and the difficulty of keeping fresh cultures is thus disposed of. These formalized suspensions are kept free of molds and other contamination by the formaldehyde, the danger of handling them is done away with and while they are not subject to spontaneous agglutination yet they agglutinate readily with anti-typhoid serum or with serum from a patient giving a positive Widal. The stock cultures should be kept in triplicate in sealed tubes on plain agar and if kept in the dark need to be transferred only about once a month. It seems very desirable to include several strains of typhoid and paratyphoid in the suspension, that is a polyvalent suspension should be made. Although both the typhoids and paratyphoids have been considered sufficiently homogeneous so that one strain may be used satisfactorily in vaccination yet it has been the experience of this laboratory that there is an occasional Widal which will give a negative reaction with one strain of typhoid and a positive with another strain. It is most necessary if using only one strain to select one which will give a high per centage of positives, a uniform emulsion and which will not agglutinate spontaneously. The Rawlings' strain seems to fulfill most of these requirements very well. It is the strain used by all authorized commercial laboratories for the preparation of vaccines. A well known strain of para A and para B should also be used and can be obtained from any reliable culture collection such as the American Type Culture Collection, Chicago, Illinois.

There are very few reports in the literature on the use of several strains in Widal tests but a number of authors have emphasized the importance of using typical and easily agglutinable strains such as the Rawlings' and Worchester strains. Our experience in this laboratory has impressed us with the necessity of using such strains. We have observed that in a series of Widals run in this laboratory that with three organisms selected from our stock cultures and two others obtained from the laboratory of the New York City Board of Health, the per centage of Widals giving positives was only from 20 to 45 per cent while the same Widals run with the Rawlings' and Hopkins' strains gave a per centage of positives from 75 to 90 per cent.

The antigenic peculiarities of such organisms might account for the occurence of negative Widals in typhoid fever. If the strain infecting the patient were not antigenically similar to the strain used in the Widal it is conceivable that an appreciable amount of agglutinin would not be present in the patient's blood for the strain used in the laboratory. Conversely if the laboratory used one strain only and that happened to be one of the less agglutinable

strains it is possible that the patient's blood might not agglutinate it.

Recently a case has been called to our attention in which a vaccinated patient became infected with typhoid from a milk epidemic. His blood gave no agglutination with the Rawlings strain at any time but contained abundant agglutinins for the infecting strains and other strains isolated from the other cases in the same epidemic. Such things emphasize the importance of using a polyvalent suspension for Widals in order to increase the reactivity of the antigen where one is dealing with a possibility of a variety of antibodies such as one may encounter in the blood serum of patients infected with the typhoid or paratyphoid bacilli.

To summarize then; 1. it is desirable whenever possible to have whole blood serum with which to run Widals, if this is not available dried blood or blood diluted with distilled water may be used; 2. it is most important and desirable to set up each Widal with a polyvalent suspension of typhoid and para A and B in formalized cultures.

1. N. P. Sherwood: Laboratory Section of The Journal of the Kansas Medical Society. December, 1926.

2. Cornelia M. Downs. Antigenic and Metabolic Studies of Bacillus Typhosus. (Thesis) Univ. Ks. Sci. Bulletin, Mar., 1926

UNIVERSITY OF KANSAS CLINICS

Clinic of Edward L. Saylor, M.D.

Department of Pathology

A CASE OF AURICULAR FIBRILLATION COMPLICATED BY AN ACUTE INTESTINAL OBSTRUCTION

Clinical Findings—Here we have a man aged 70 who was admitted to the medical service complaining of abdominal pain, nausea and vomiting. He had been a moderate user of alcohol, and his past history revealed a mild diabetes of over ten years duration which he controlled to some extent by diet. Shortly before his admission he began vomiting a thin brownish material that had a sour but not a fecal odor. He was somewhat constipated and the enemata given him while in the hospital were ineffective. Physical examination revealed a rapid and irregular heart with a difference of eight beats per minute between the apex impulse and the radial pulse, suggesting auricular fibrillation. He had an umbilical hernia, that had been present twenty years, without causing any symptoms, but is now found to be a round, firm, tender, non-reducible mass about the size of an orange. During his three day stay in the hospital he showed no other definite symptoms. A specimen of blood was taken thinking that the blood chemistry would throw some light on the cause of the vomiting. If a marked reduction in the blood chlorides were found it would point to intestinal obstruction. Soon after this specimen of blood was drawn he had a severe attack of vomiting and died suddenly. The next day the laboratory reported the blood chlorides 200 milligrams lower than normal and a blood sugar of 286 milligrams, whereas the normal should be about 100 mgs. per 100 cc. So with these laboratory findings and the history, associated with the abdominal pain in the region of the umbilical hernia it was suspected that he died primarily a cardiac death, complicated by a mild diabetic condition, and an acute intestinal obstruction, due to the strangulation of a loop of gut within the neck of the umbilical hernia.

Autopsy—These are the autopsy findings. A mass of omentum is pushed up into the umbilical hernia through an opening about 2 centimeters in diameter and is firmly adherent to the inner surface of the sac. The stomach and proximal half of the small intestine are markedly discolored and distended with a thin brown fluid. Just below the dilated portion there is a circumscribed inflamed pouch of jejunum about 4 centimeters in length that is caught in the hernial opening. The lower portion of the small intestine is pale and contracted. This is evidently a strangulated Richter's hernia causing intestinal obstruction.

The liver extends four fingers below the costal margin and weighs 2150 grams. It is fairly firm and has a brick red color. The surface is rough and uneven from the projections of very small nodules of liver tissue, between which are fine contracted strands of connective tissue. Cut section does not show a distinct macroscopic subdivision of the liver lobules by fibrous tissue. The gross picture is that of an early atrophic cirrhosis.

There is about 150 cc. of clear fluid in each pleural cavity and there are some old adhesions around the right upper lobe. The lungs are edematous and show some hypostatic congestion.

The heart is enlarged, weighing 515 grams and is soft and flabby. It is considerably dilated especially on the right side. The coronary arteries show marked

sclerosis and calcification, and there are scattered areas of fibrosis in the myocardium. The aorta also shows calcification and numerous atheromatous plaques.

The spleen is soft and congested and larger than normal. The pancreas is also enlarged because of an abundant infiltration of fatty tissue which, on cut section, shows fat surrounding islands of pancreatic tissue. The kidneys show passive congestion.

Microscopic examination of the heart shows fragmentation and segmentation of the muscle fibers, and a high grade brown atrophy with granulation and degeneration of the cytoplasm, and some lipomatosis and fibrous tissue replacement between the fibers. The lungs show some edema and congestion of the alveoli. The capsule of the liver is thickened and there is an increase in fibrous tissue around the portal spaces. There is also a high grade fatty infiltration most marked around the periphery of the lobule. In the kidney there is an increase in edematous tissue throughout the medulla, and there are numerous casts in the collecting tubules with some disintegration of the tubular epithelium. In the pancreas there is an increase in interlobular fibrosis and with this there is a marked diffuse lipomatosis. Most of the islands of Langerhans are small. Section through the jejunum shows considerable autolysis of the mucosa with focal areas of mononuclear inflitration. The vessels of the submucosa are dilated and congested.

The suddenness of this man's death and the finding of a large flabby, dilated heart, with sclerosis and narrowing of the coronary arteries to impair its nutrition, combined with the microscopic evidence of muscular degeneration would oint to a cardiac death. This malnutrition is evidenced by fragmentation and segmentation of the muscle fibers with fatty degeneration, and is in reality a senile change due to a diminished amount of blood that can penetrate the obliterating coronary arteries. It is in this senile type of heart that we often have an accompanying auricular fibrillation. Although auricular fibrillation is usually considered a clinical entity because of its distinguishing signs and response to treatment, it should be regarded as the expression of a damaged myocardium. The ultimate prognosis depends therefore on the integrity and nutrition of the cardiac musculature. This form of sudden death is often referred to indiscriminately as cardiac failure without attaching enough importance to the conditions which bring it about. An important factor in a failing heart is the amount of reserve force it has or in other words the heart's ability to compensate for the extra work thrown upon it. In this case we have an old man whose cardiac response is lessened on account of his age, combined with a mild long standing diabetic condition, and an early portal cirrhosis in which the fibrosis had not progressed to the point of causing portal obstruction with the accompanying ascites.

The large size of the liver is due to the diffuse fatty infiltration which had not yet been replaced by contracting bands of scar tissue. In addition to the debilitating condition due to the disturbed carbohydrate metabolism and the toxemia that accompanies a cirrhosis of the liver, there is a complicating acute intestinal obstruction due to an unusual condition. The umbilical hernia which had been present for years without causing any trouble, suddenly envelops a loop of jejunum which becomes lodged firmly enough to cause venous obstruction followed by an acute inflammatory edema and swelling of the wall of the gut, thereby producing a vicious cycle. The fact that the obstruction is high in the intestinal tract is responsible for the reduction of the blood chlorides. The vomiting which naturally accompanied the obstruction threw a sudden and rather severe burden on the weakened and fibrillating cardiac muscle. This caused a complete exhaustion of the reserve force of the heart and resulted in rapid dilatation and death. It is wrong in this case to look upon the heart as the sole factor in the failing circulation and to disregard the effects of the chronic disease processes on the entire vascular tree. In health with the cardio-vascular system coordinating smoothly the intestinal obstruction could have been treated surgically and perhaps the fatal issue avoided, but with a geratic circulatory apparatus hampered by a long standing diabetes and a chronic interstitial hepatitis an operation would be contraindicated. Even without these handicaps the operative mortality is very high where the intestinal obstruction is due to a strangulated umbilical hernia.

Clinic of H. L. Dwyer, M.D.

Department of Pediatrics

INTUSSUSCEPTION

A male infant, eight months of age, became suddenly ill at 8 a. m., with severe

abdominal pain. When I examined him an our later, he was not in pain but the pallor, sweating and anxious expression indicated a considerable degree of shock. During the examination he vomited for the first time. While being observed he had another apparently normal stool and slight abdominal cramping. Physical examination was otherwise negative.

During the day he did not take his food as well as usual, and at times had attacks of abdominal pain. He seemed to be improved.

When seen the next morning, he had passed three stools which had lost their fecal character and were entirely of blood. Nothing could be felt by rectum but when the finger was withdrawn a considerable amount of blood followed. A curved sausage-shaped tumor could be felt in the region of the umbilicus, through the relaxed abdominal wall.

A diagnosis of intussusception was made and hypodermoclysis started preparatory to operation. At operation the following day at 4 p. m., 32 hours after the beginning of symptoms an intussusception was found, the ileocecal portion of the bowel has passed into the splenic flexure. This was carefully reduced by a "milking" process, care being taken not to pull the invaginated portion out of the colon. There was a moderate swelling and discoloration of the bowel.

Post-operative care consisted of a mixture of dried milk in water for a few days, and small quantities of salt solution frequently, and 5 per cent glucose. It was found that the baby would not take 2 per cent salt solution, but when the strength of this was reduced one-half by adding an equal amount of 10 per cent glucose solution he took it readily. In four days he was put back on his usual feeding of whole boiled milk and progressed rapidly.

COMMENT

Sudden abdominal pain with pallor in fat well nourished babies between 5 and 10 months of age is a classical sign of intussusception. When the bowel movements lose their fecal character and become bloody the presence of a tumor by rectal examination or felt through the abdominal wall makes the diagnosis. The tumor can be felt easily through the wall, but when felt in the rectum the diagnosis has been made too late for a favorable operative result.

In the case under discussion the baby should have been operated on during the first day of the intussusception. A breast fed infant or a thriving bottle fed infant becoming suddenly ill with shock, pallor, sweating and severe cramp like pains, should be examined for blood in the rectum, not once but several times on the day of the symptoms. If this had been done in the present case no doubt the baby would have gone to operation on the first day.

PYLORIC OBSTRUCTION

A breast-fed male infant, four weeks old was brought to the hospital because of persistent vomiting. The vomiting started at the third week of life, and was becoming progressively worse. Not every feeding was vomited, but when one or more feedings were retained the next vomiting was very profuse giving the impression that several feedings were emitted.

The baby was on three hour feeding intervals, the vomiting was projectile in character and part of the vomitus came through the nose. He had been very constipated since birth.

At the time of the examination the baby was in a fairly good nutritional condition and when given a bottle of water and placed in a shaded light from the window, the large hour-glass peristaltic waves were visible passing from the left to right across the abdomen. A diagnosis of intestinal obstruction was made, either pylorospasm or pyloric stenosis. Atropine in 1-1000 grain doses was prescribed, to be given fifteen minutes before each nursing. This was enough atropine to cause flushing and gave slight improvement for two days. Thick cereal gruel was then started in conjunction with atropine, and the baby removed from the breast. The thick cereal was made after Sauer's original formula of skim milk, water, farina and dextrimaltose. A slight improvement in the vomiting was noticed for the two days following. Then the vomiting again became severe and inasmuch as the antispasmodic treatment and the thick cereal gave no relief it was very evident that we were dealing with a stenosis. Normal salt solution had been given to combat dehydration and marked loss of weight. In the week the baby was under observation there was a loss of weight from 7 lbs., 4 oz. to 6 lbs., 8 oz.

The infant was sent to operation in good condition and a definite pyloric stenosis was found.

The post-operative care consisted of the administration of saline solution subcutaneously 200 cc. daily, and the feeding of small amount of diluted breast milk. One dram of breast milk and one dram of water

was given two hours after operation, and every two hours for the first day. The baby vomited slightly during the first day and seemed hungry. Thick cereal was given, through a hygeia nipple in which a large hole was cut. The whole breast milk in gradually increasing quantities was given for the following three days. On the fifth day, because of a failing breast supply the baby was put to the breast every two hours and his recovery was uneventful.

So much has been written on congenital pyloric stenosis that it would seem that no baby would be allowed to become so wasted from vomiting, that it would come to the operating table in a danger-state from starvation. There are only two other conditions that are likely to be mistaken for true congenital stenosis, and they are pylorospasm and congenital stricture of the duodenum. The latter condition is amenable only to surgery and it is not so necessary that the differential diagnosis be made.

Persistent vomiting in a breast fed baby on three or four hour feeding intervals, should be investigated with pyloric obstruction in mind. These babies usually start vomiting between the third and sixth week of life. The cases with stenosis start earlier than those with spasm and the symptoms are more pronounced. The cases of pylorospasm are very common and will usually yield to thick cereal gruel or to atropine. The atropine must be given in physiological doses, that is enough to cause flushing, before it is discarded.

The large distinct pyloric waves, the profuse projectile vomiting with no improvement from atropine and cereal, the scant starvation mucus stools, and the progressive weight loss make the diagnosis of stenosis. There is no need of serial x-ray plates of the stomach to determine the emptying time.

It is thought that no case is entirely one of spasm or of stenosis, but the element of spasm is a factor in the true stenotic cases. Therefore every baby should receive the therapeutic test, atropine in sufficient doses and thick cereal gruel before going to operation.

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Glandular Therapy

Articles on glandular therapy have been prepared under the direction of the Council on Pharmacy and Chemistry for inclusion in a new edition of the series of articles on glandular therapy which was published in The Journal, Sept. 27 to Dec. 20, 1924. The first article is by J. B. Collip, Edmonton, Alta. (Journal A. M. A., Feb. 19, 1927), on the chemistry and physiology of the calcium mobilizing hormone of the parathyroid glands. Briefly, the function of the hormone in the normal animal appears to be that of a regular calcium metabolism, and its action is primarily as a calcium mobilizer. The second article is written by William S. McCann, Rochester, N. Y. (Journal A. M. A., Feb. 19, 1927, on parathyroid therapy. He says that it is now possible to assert with confidence that we possess a therapeutic agent derived from the parathyroid gland which produces profound changes in the calcium metabolism, so that when dogs are deprived of their parathyroid glands, the resulting condition of tetany is relieved by the injection of this substance, with a coincident return of the calcium metabolism to normal. The use of parathyroid extract is clearly indicated in the treatment of tetania parathyreopriva and in infantile tetany. The effect on gastric tetany has apparently not yet been investigated. None of the preparations at present available are entirely satisfactory. Local irritation is often very marked, and it is doubtful whether long continued use is possible without the additional use of calcium.

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Human Infections with Organism of Contagious Abortion of Cattle and Hogs

Twenty cases of human infections with the organism of contagious abortion of cattle and hogs occurring in the United States and already on record are discussed by Alice C. Evans, Washington, D. C. (Journal A. M. A., Feb. 26, 1927). The type of infection was determined by the agglutinin absorption test. Cultures were available from all but four of the cases. These cases give ample proof that undulant fever may be contracted from cattle or hogs. In addition to the twenty cases for which the type of infection was definitely determined as the *abortus* variety of *brucella melitensis,* other cases of undulant fever have been found in recent months in parts of the country where it does not appear that the infection could be attributed to goats. These cases were diagnosed by the agglutinin test. Reports from South Africa, Italy, Palestine and the Dutch East Indies are confirmative.

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Gnathologist is the new name for dentist. The name includes masticatory exercise.

THE JOURNAL
of The
Kansas Medical Society

W. E. McVEY, M.D. - - Editor

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MEDICAL LEGISLATION

One who expects to accomplish very much in the way of medical legislation in a Kansas legislature is almost sure to be disappointed. Those who have been experimenting in this line of endeavor for the past forty years have learned to accept with good grace the favors received and thank their lucky stars if no adverse legislation is put over.

Any bill that carries the label of the medical profession, or one that has even suspicious earmarks, goes promptly to rest in the committee mortuary. The mortality rate on bills introduced by doctors is about 99.9 per cent.

The Basic Science Act got just as far as our bills usually get. It was not a simple matter to find some one willing to introduce it. Senator Morgan, a member of the Society and the only physician in the Senate, was prevailed upon to introduce it. And, as he predicted, it was promptly killed in the committee.

The bill was introduced in the House by Rep. Parkhurst (by request) and, although it survived for a short time, was just as thoroughly killed by the committee of the House.

At this time there is still some hope that an appropriation for new buildings for the medical school will be made.

Mr. Endres, from Leavenworth, introduced House Bill No. 533, which provides for the abolishment of the board of medical examiners and the board of nurses examiners. So far as learned to the date of writing this, it has not been reported out of the committee. There is a reasonable doubt if there were any serious intentions behind this bill, but no one can be sure. The chairman of our legislative committee, Dr. W. S. Lindsay, has been watching the proceedings very carefully and is right on the job.

It was hardly reasonable to expect that our Basic Science Act would be passed at this time, but the legislators, or some of them, will have two years to think it over, the physicians in the state will have two years in which to talk with them or their successors about it; our Bureau of Public Relations will have two years in which to convince the public that a provision of that kind is for their protection; and at the next session of the legislature, the medical profession can sit in the gallery and watch the representatives of the people scramble to get to the front of the line for its support.

FEES

In the early history of medicine it was not the custom for a doctor to charge a fee for his services, but if the people were able to do so they made him a present—an honorarium. It was to be expected that the honorarium corresponded in some degree, at least, with the wealth or social standing of the people receiving the service. Naturally people selected their medical attendant, as they still do to some extent, from those of their own social standing. The poor doctor of lowly origin had a hard time, altho he might be better qualified and more skillfull than the man whose birth and heritage had gained for him a greater reputation.

This old idea of an honorarium for medicil services has had its influence on the business side of the practice of medicine from that time to this and is still to some

extent a factor in our business relations with the people.

In London it was the custom, before the war, to adjust the physician's fees according to the wealth of the people served and this was determined by the amount of rent paid, or the character of the home and its location. It seems that until recent times this system of charging was upheld by the courts.

It has been the custom in this country, for a very long time, for the physicions in a community to charge the same fees for the same services. Specialists and surgeons have varied their fees—sometimes according to the ability of the people to pay and sometimes according to the reputation of the operator, but they have always had different fees for different operations.

The general practitioner, on the other hand, charges the same price for a visit to a case of pneumonia that he charges for a visit to a case of typhoid fever. If the case hoppens to be in the country he charges by the mile, like a taxi driver, if it is in town it is the same price whether he goes two blocks or two miles.

It is possible that some one at some time, will succeed in inaugurating some equitable system of charging for medical services.

However, there is one adjustment in the matter of fees that can be made, one that would be equitable and fair to the people and the physicians concerned. Experience should be, and generally is, an asset and one that the physician should be able to realize on. The services of a physician who has had ten years experience are worth more to his clientele than those of one just beginning to practice; and this is particularly true if that experience has been acquired in one community. His familiarity with the medical history of his people, with their physical and mental attitudes, their peculiar reactions, their habits and their vices, is not easily acquired and cannot be handed over to a successor or competitor. His experience has been bought with physical and mental labor, greatly out of proportion to the remuneration received, and after ten years, he should have an opportunity to market that experience for what it is worth.

In any community where there are several physicians a rule might be agreed upon that after ten years experience ones fees should be increased, possibly twenty per cent, and that with each ten years experience a further increase should be made.

A plan of this kind would help the younger man in a community, would make fairer competition and would enable him to secure business that with equal fees would go to the older man. On the other hand, while the older men would lose some of their less profitable and more burdensome business, they would retain their most desirable families and would be relieved of much unnecessary work, and still have a larger income.

CONTRACT PRACTICE

The principles of ethics by which members of the medical profession are supposed to be guided in their relations to the people and with each other, are presumably broad enough to occasion no very great difficulty in their observance. However, problems are continually presenting that seem to require some very fine discrimination in their solution.

The ethical status of contract practice is becoming more and more of a problem. Section 2, article 6, of the Principles of Medical Ethics of the American Medical Association reads as follows:

"It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community. To do this is detrimental to the public and to the individual physician and lowers the dignity of the profession."

A strict interpretation of this section would certainly implicate every form of contract practice.

It would not, perhaps, apply to the chief surgeon of a railroad whose duties are largely of an executive nature. It does apply to all those employed by railroad hos-

pital associations on a fixed salary basis; or by other industrial hospital associations or sickness insurance associations that provide medical service for their beneficiaries. It is perhaps possible in many of these associations for the employed physician to give adequate service to his patient, but the most objectionable feature of this contract practice is that it destroys fair competition.

The system adopted by all such bodies is merely an exploitation of the medical profession. No other class of business men would permit themselves to be so used. That we are so used is not so much the fault of the people who organize these associations as it is the fault of the medical profession itself.

These health insurance organizations are regarded as economic measures by the large industries. They calculate the labor lost by sickness among their employees and the cost to the employees themselves, including expense for medical attention.

Let us suppose that the average cost per month for medical attention for each of one thousand employees was $2.00, or a total of $2,000 per month. Then, if a doctor can be employed to care for all these people for $150.00 a month there would be a saving of $1,850 each month or $22,200 in the year. Household expenses, especially food and rent cannot be materially reduced, for neither the grocer nor the landlord has so flexible a scale of charges as the doctor, but the $1,850 a month saved on the cost of the medical services can be used to cover all, or part, of these fixed charges.

It is a good business proposition, so the association is formed and each employee pays $2.00 a month out of his wages. When he is sick he is given free medical services and a weekly benefit to make up for his loss in wages. In other words, the medical profession pays his weekly benefit.

In such associations as that, the medical profession is exploited for the benefit of industrial labor but there are other association in which the exploitation is commercialized—purely for the amount of money that can be made out of it.

One might construct a hypothetical insurance association of this kind, somewhat after this fashion—Suppose that a fraternal insurance association with a million members attaches to its policy a medical service clause providing for the hospitalization, and medical and surgical treatment of its members. A hospital is built and medical men are employed on a salary basis to give the necessary treatment. Let us suppose that each member of this association pays ten cents each month for this particular benefit. That would amount to $100,000 per month. Let us assume that the hospital has 100 beds and that since the number of beneficiaries is large these beds are kept occupied, perhaps there will be a large waiting list. The cost per diem per patient can be estimated at $5.00 or a total cost of $15,000 per month. This includes everything but medical and surgical treatment. We will assume that a surgeon is employed to do all the operations, for which he is paid $200.00 per month and a house physician also at $200.00. This will make a total cost for operating the hospital of $15,400 per month, a nice little profit of $84,600. Who pays it?

Since the majority of those who wish to avail themselves of these privileges must travel considerable distances to reach the hospital, we can reasonably say that there will be few, if any, acute cases, that the larger part of the cases will be surgical and that few, if any of these, will be emergency cases. Since the majority of the cases will be surgical, let us say 54 beds are for this class. Leaving out emergency cases it is fair to estimate the average hospitalization as three weeks. This means that in a full hospital with a waiting list, 54 cases will be operated upon every 21 days; or since these are not emergency cases and Sunday may be excluded, every 18 days. That will be three surgical operations every day except Sunday, or 72 each month. If the average fee for a surgical operation is $150.00 the value of these operations would be $10,800. If the medical services rendered the other 46 patients were calculated

at $3.00 per day the value of these services would be $4,140 each month.

In other words, an association such as that described is making a profit of $84,-600 on its sickness insurance plan and $14,-940 of this amount is taken from the legitimate income of the medical profession.

The man who does the surgery for such an association is taking $10,800 away from other members of his profession that he may receive $200.00.

There is no intention here to convey the idea that there is an insurance association or a hospital conducted exactly as this hypothetical one is assumed to be. The idea is to bring out as clearly as possible the principles which particularly distinguish unfair competition.

There is no trade and no other profession that would tolerate such exploitation.

There have been, and perhaps there are now, companies that guarantee to keep one's automobile in running order for so much per month. One can be sure, however, that the mechanic who does the work receives the regular wage scale for all the time he puts in.

The industrial sickness insurance associations are regarded as beneficial to the employer as well as to the employee and are cited as examples of modern economic business methods. No doubt, they have saved the employees a great deal of money—why not? The medical profession pays the bill. They can't take it away from anyone else.

A railroad company, for instance, with 50,000 employees could afford them a much greater saving than that provided by their sickness insurance association, in supplying them with food and clothing. The railroad company could buy these things at factory prices, could deliver them to itself at a fraction of what the retailer pays for freight, and could sell them to its employees at less than the retailer pays for them.

But that is an entirely different story, grocers, clothiers, butchers and bakers are not doctors, they are business men.

BENJAMIN FRANKLIN MORGAN

Benjamin Franklin Morgan was born in Pella, Iowa, Aug. 3, 1857. He grew to manhood on his father's farm, was educated in the schools there and later in the Baptist College and was a member of the Baptist Church.

While quite young he learned telegraphy and held the position as telegraph operator and express agent at several U. P. points in western Kansas. Here he shared the experiences incident to Indian raids of those days. Later he went into the mercantile business in Wakeeney, Kansas, where on May 22, 1882, he married Lucy M. Hanna, the youngest daughter of Capt. B. J. F. Hanna, Register of the U. S. Land Office there.

His brother, Dr. H. W. Morgan, persuaded him to take up the study of medicine and he entered medical school in Des Moines, Iowa, but later transferred to Rush Medical College at Chicago and subsequently took Post Graduate work in both New York and Chicago. He first practiced medicine in Riley, Kansas, then desiring a larger field, moved to Denver, Colorado, where he developed a very satisfactory practice.

Both of his brothers were pacticing medicine in Clay Center, Kansas, and on the death of his younger brother he was persuaded to return to Kansas and locate in Clay Center to continue the practice of his brother, as the town had not been without a Dr. Morgan since 1883.

In April, 1899, he formed a partnership with Dr. M. C. Porter. This continued during Dr. Porter's residence in Clay Center. After that he practiced alone until his son, Edwin C. Morgan, who graduated from Northwestern University Medical School, Chicago, was taken into the firm.

He was always loyal to, and a hard worker for anything that would add to the betterment of the town in which he lived, giving his time, money and strength whole heartedly to anything that would be of benefit to Clay Center.

He and Dr. Porter started the first hos-

pital in a small house on 3rd street. A few years later a stock company was formed and what is known as the 'Old Hospital' was opened and for years he was devoted to its interest, standing between it and failure at one time by his own personal generosity.

His optimism and his determination to sometime have a better place in which to care for the sick of the community, helped in a large measure to make the New Hospital a dream fulfilled.

Forty years of caring for the sick has made him many close friends, for no one is nearer to a family than their doctor. His tender sympathy and skillful care has blessed and saved many a life and his patients have ranged from the lowest to the highest—an Ex-President at one time was one of his patients.

After his son had gone to France in the World War, he also volunteered for active service, but on account of his age was not accepted, but he gave his time and service unstintedly and without remuneration to to the examination of applicants for service as well as acting medical examiner for drafted men.

He was Chief of this district of the American Protective League, an auxiliary to the U. S. Department of Justice, and was always very proud of that badge.

He was an active member of the Red Cross Committee of Clay county and was always ready to serve when called upon.

During the "flu" epidemic he worked incessantly and heroically, never failed to answer a call if it was humanly possible to make it, on the go continually, so much so that his intimate friends often wondered how he could possibly stand the strain.

He was for many years Surgeon for the U. P. and R. I. Railways.

Last year he was elected President of the Kansas State Medical Society but on account of sickness has been unable to take an active part in its affairs.

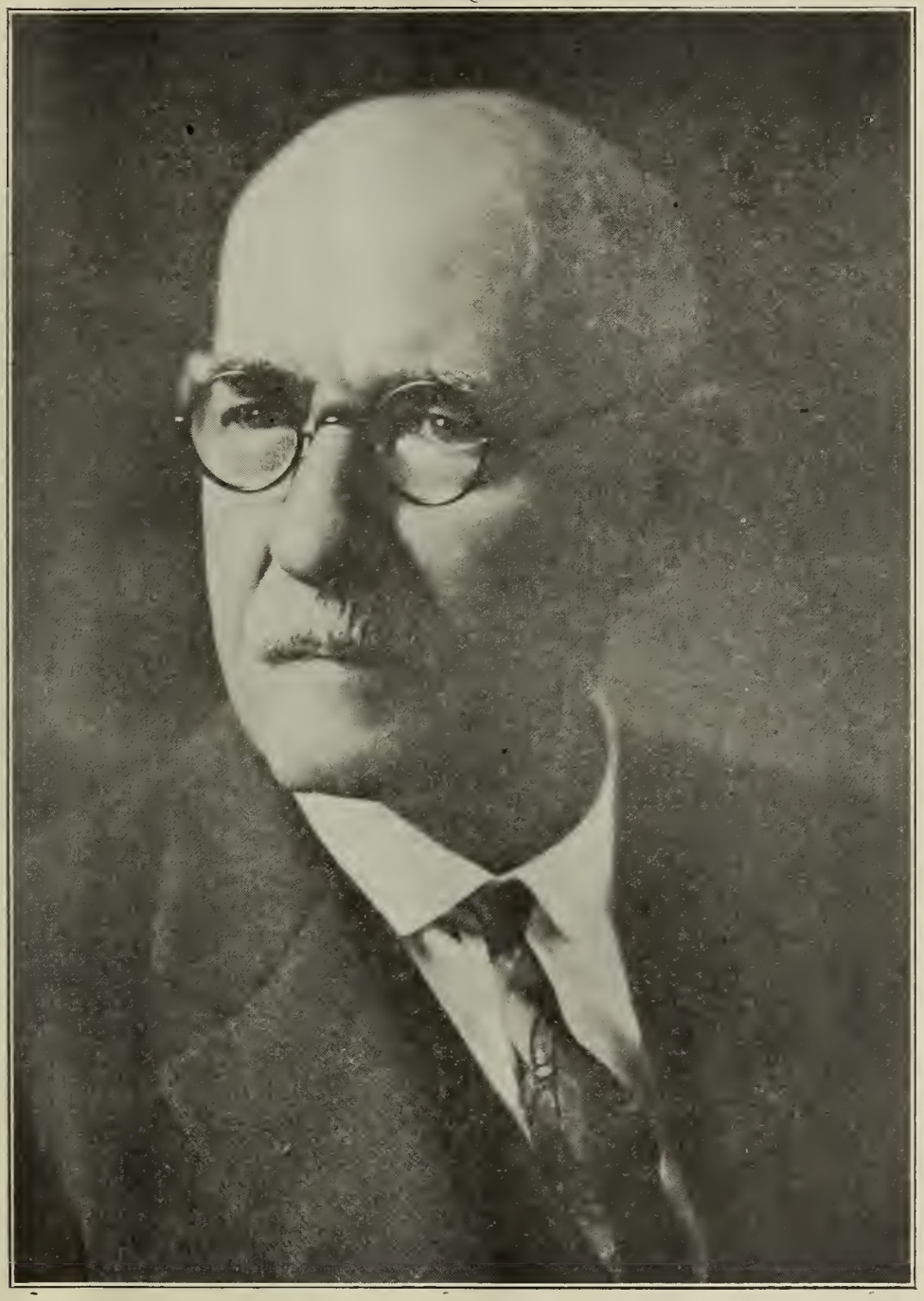
He was always an enthusiastic worker for good roads and was President of the White Waw Organization during its life time and Chairman of the County Committee of the Midland Trail Association until it was merged into the U. S. 40.

Perhaps the most outstanding work of later years and one he was particularly interested in was a paper on Eugenics he prepared from his research work, because of the appalling amount of illiteracy, crime and insanity, resulting from unfit marriages. This paper was read before the Kansas State Medical Society and created so much interest he was requested to repeat it at meetings in Chicago and various other times in Kansas cities, as well as having it published in several Medical Journals with favorable comments.

He was always active in Masonic circles, a Past Master of the Masonic Lodge, a Past Commander of the Knights Templar, an Arab Chief of the Shrine, an active member of the Chamber of Commerce and the Rotary Club, a charter member of the Clay Center Club and Clay Center Golf Club.

His hand was gentle, yet skillful in the relief of pain—his heart tender toward all who suffered. He was more than physician, he was friend and counselor as well. No night was ever too dark or cold, no road too long and rough for him to brave its hardships for the relief of a suffering one, until failing health compelled him to realize that even his strong constitution had its limitations. He was a loyal friend, for his friends meant much to him—fearless in upholding whatever he considered right, would permit nothing to lower either his moral or professional standard—and was always a power to be reckoned with if those interests were threatened. He has lived a life full of usefulness and kind unselfish deeds, and the greatest heritage he leaves is the loving memories in the hearts of the many friends who loved him.

He is survived by his wife, Mrs. Lucy Morgan, a son, Dr. E. C. Morgan, a daughter, Margaret D. Morgan, a grand daughter, Peggy Morgan, and two sisters, Mrs. Mattie Paschal, Denver, Colorado, and Mrs. I. M. Earle, Des Moines, Iowa.



BENJAMIN FRANKLIN MORGAN
1857—1927

LEGITIMATE ADVERTISING

A Ten Dollar Prize Offered

A great deal of criticism has been made by the newspapers of our code of ethics which prevents advertising by physicians.

There is nothing a physician can profitably advertise and maintain his dignity as a trustworthy citizen and a member of an honored profession. To advertise ones superior skill is immodest, egotistical and very likely a misrepresentation, besides being unfair to others in the profession. To advertise exclusive knowledge or particular methods of treatment is likewise very certain to be misleading and unfair to other practitioners.

There can be nothing objectionable, however, in advertising scientific medicine which will benefit each and every member of the profession alike. In some states this kind of advertising has been carried on to a considerable extent. In those states the county societies have carried advertisements in the newspapers, giving the names of all the members of the society. Such advertising has its good points and we understand some favorable results have followed.

While there is no serious objection to this plan, and it might be followed by some of the larger societies, it is impractical for general adoption, for the present at least. Another plan is proposed by the Bureau of Public Relations. This plan is to tell the people, through a series of pamphlets, what scientific medicine has accomplished. It will be a selling campaign—a campaign to sell scientific medicine to the people on its merits, on its history of accomplishments, on the superiority of its methods and the high qualifications required of those who practice it.

What line of argument would you use to convince a well educated lawyer that he should employ only practitioners of medicine when he or a member of his family is ill?

The Bureau of Public Relations will pay ten dollars ($10.00) for the best argument presented in an article of not more than one thousand words. All articles submitted to be the property of the Bureau and to be used in this campaign if desirable. All articles to be submitted before April 1, 1927.

CHIPS

Dermatopic is seeing with the skin and is the sixth sense. Olfactopic is seeing thru the nose and is the seventh sense.

The potato nose is cured by an attack of scarlet fever or an injection of the serum?

Beware of the doctor who always gets there just in time—if the patient lives, or who was not called in time if the patient dies.

Having found out the composition of the atom to be electrons, positive and negative, scientists are now engaged in analyzing the electron and finding out its parts. The goal of the scientist is to find out what energizes it all. However, it is better for man to know what a thing does than to know what a thing is. For example, we know what electricity does but we do not know what it is.

Chemiluminescence is the name given to a new kind of light, caused by chemical reactions which involve no burning or combustion. It is in the class of perpetual motion.

Eight deaths are caused by pneumonia while the combined death rate of cancer and tuberculosis is but ten, according to statistics. The statement may not be exact but it is near enough the truth to show that pneumonia is a more fatal disease than is either cancer or tuberculosis. Familiarity with a disease breeds contempt, or at least neglect of preventive measures.

Requiring a student to take a year's study in Latin, German or French before he can enter a medical college is a questionable one. The smattering knowledge of a language, the same as a superficial medical education, qualifies a man for neither an understanding of the language nor fits him for the practice of medicine. The former knows just enough of the language to be easily led astray in its meaning and the latter to make him a dangerous practitioner in medicine.

In a good many of our text books what is called digestive leukocytosis is described as an established fact. Recently Dr. A. F. Bernard Shaw has shown that though the total leukocyte count may vary 1,000 or 2,000 at short intervals this variation is not

dependent upon food, exercise or sleep; but it is a diurnal variation, the maximum of one tide being reached in the afternoon and the other a little after midnight. It is also claimed that these changes are due to fluctuations in the neutrophile cells and the lymphocytes and other varieties are not involved.

Why there is a cessation of the seizures in epileptic children during and for a short time after a period of fasting, is a problem that has been studied by Talbot and Moriarty of Boston, and Metcalf of Los Angeles (Am. Jr. Dis. Children Febr. '27). Among the changes observed as occuring as a result of the fast was a marked excretion of acetone bodies, shown by the breath and urine. They attributed the beneficial effects of fasting to the acidosis produced. It was observed that a ketosis-acidosis was marked in the fasting patients while they were free from attacks and it was thought that the ketosis might be the factor upon which the good result depended. A series of children with epilepsy were then tried out with a high ketogenic diet—a high fat and low carbohydrate and protein diet. Coincidentally with the marked ketonuria resulting from diets of higher ketogenic ratios, a cessation or reduction of attacks occurred. If an excess of carbohydrates is taken the ketosis disappears and epileptic attacks recur.

Henry J. John has made a statistical study of 1000 cases of diabetes treated in the Cleveland Clinic (Arch. Int. Med. Jan. '27). In regard to the role of heredity in the production of diabetes he says: "While the per centage of diabetic cases in which one can trace either a familial or hereditary connection is fairly large, nevertheless it would seem that the factor of environment plays a more important role in this group of cases. The important points are that; whatever the familial or hereditary incidence of diabetes, if one lives moderately and stays thin, diabetes will not develop, and that, on the other hand, obesity and over-indulgence often lead to diabetes even when there is no hereditary history of the disease."

The new Christ's Hospital will probably be opened about April 1st. This hospital is regarded by experts in the line of hospital construction as one of the most complete and modern institutions in the West. It will have 100 beds, two general operating rooms, and two specialists operating rooms, with an x-ray room on the same floor. It is constructed of reinforced concrete, with flexotile floors, steel door frames, and will be equipped with all steel furniture.

Errors in the diagnosis of diseases of the accessory sinuses may sometimes occur because the nose has been treated shortly before the radiographs are made. If the nose has been swabbed with cocaine or adrenalin a few hours beforehand the radiographs will very likely fail to show a pathologic condition, because the sinuses have been thoroughly drained.

The statement that during the past twenty-five years—that is to say, during the period of experimental research into this disease—there has been greater progress in the study of cancer than in the study of any other single serious malady that attacks human beings, is credited to Dr. W. E. Gye; who, in England at least, is regarded as authority on this subject.

One wonders why there are no veterinary chiropractors.. Animals have many of the diseases with which human beings are afflicted. Some animals might be rather difficult to manipulate, but with proper appliances it might be done. One wonders also if people would fall for that kind of treatment for their sick animals as readily as they do for chiropractic treatment for themselves or their families.

Senator Endres, Leavenworth, introduced a bill providing for the abolition of the State Board of Examiners for nurses. He claims that this board fixes prices for the nurses and that recent advances to $6 per day are unreasonable. Of course, the Board of Examiners does not fix prices or have any authority to do so. A nurse may practice in this state without registration, but a certificate from the board is an evidence of her training and qualifications; and it also secures for her recognition in the National Association and reciprocity privileges in other states. The repeal of the law providing for a board of examiners will very likely prove a serious handicap to the hospitals. Nurses will naturally prefer to take their training in states where a certificate is issued.

As an evidence of what may be accomplished by co-operation, Northwest Medicine reports the recent action of the Medical Society of Portland, Oregon. It seems that a physician's telephone exchange had

been maintained there for a number of years, the doctors paying $4.75 per month for the service. In November they were notified that the rate would be increased to $10.00. The county and city societies appointed a committee to make plans for a co-operative exchange. Two hundred doctors and dentists subscribed and the exchange is being conducted on a rate of $3.00 per month and a reduction to $2.00 per month is promised in a short time.

A report of the isolation of the specific organism causing rheumatic fever has been published and also the results of trials with an antiserum. Streptococcus cardioarthritidis, the name given to the organism which was isolated from the blood sulture of only two patients with rheumatic fever, differs in only one respect from the usual nonhemolytic streptcoccus. The claim of the relation of the organism to rheumatic fever appears to rest chiefly on the results obtained from treating patients with an antiserum prepared by immunizing a horse with this streptococcus. The case reports are not convincing. Favorable reports with a serum prepared by immunizing horses with cultures of streptococci isolated from throats of rheumatic fever patients have been published previously; they were probably due to a non-specific reaction. Since then, curative effects have been reported from the use of various forms of nonspecific protein preparations. (Jr. A.M.A., Feb. 5, '27.)

According to the U. S. Pharmacopeia X: "Ether to be used for anesthesia must be preserved only in small, well closed containers, and is not to be used for this purpose if the original container has been opened longer than twenty-four hours." The impurities found in ether are due to the presence of air and moisture, and the action of daylight, which leads to complex oxidations. Among the products found are hydrogen peroxide and most commonly irritant aldehyde. (Jr. A.M.A., Feb. 19, '27.)

Attempts to give insulin by mouth, perlingually, by duodenal tube, intratracheally, by inhalation, and by rectum, either in solution or in suppositories, have given results which in the main are either mechanically difficult, inconclusive, inconstant, or wasteful of the drug. An investigation has recently been made to decide whether insulin inunctions would be of any value in the treatment of human diabetes. As much as 1,000 units of insulin dissolved in almond oil was rubbed for a period of one hour into the skin of the abdomen, chest and arms with entirely negative results. Other vehicles were used with equally negative results. On the basis of this evidence the conclusion must be that insulin inunctions "are useless as a therapeutic measure." (Jr. A.M.A., Feb. 26, '27.)

Experiments have been made which indicate that parathyroid extract-Collip mobilizes from the bones a certain amount of stored lead which is readily available. Since the amounts of lead excreted following this treatment were far greater than those obtained in previous investigations, when ammonium chloride or phosphoric acid were given, the method will probably have some therapeutic value in the treatment of lead poisoning. (Jr. A.M.A., Feb. 19, '27.)

Tissue Diagnosis in the Operating Room And Immediate Cover-slip Examinations of all Fluids and Pus

Dear Sir:

I will consider it a courtesy if you will publish this letter in your journal, as I am anxious to come in correspondence with pathologists and surgeons interested in the immediate examination, by frozen section, of tissue in the operating room and the immediate cover-slips of smears from all fluids and pus.

Microscopic examinations of stained frozen sections has been possible for more than a quarter of a century. The staining of unfixed frozen sections with polychrome methylene blue and other stains is a well-established procedure. In many operating rooms in university and other large and small surgical clinics, provisions for these immediate diagnostic studies have not only been available, but have been in practical use for years. While, unfortunately, on the other side,this diagnostic part of the operating room is conspicuous by its absence in many clinics.

Before 1915 it was rarely necessary for a surgeon well trained in gross pathology to need a frozen section to help him in diagnosis at the operating table. Since 1915, and especially since 1922, the public has become so enlightened that malignant disease formerly easily recognized either clinically or in the gross, now appears in our operating rooms devoid of its easily recognized clinical and gross appearance and can only be properly discovered by an immediate frozen section. The majority of operating

rooms are not equipped or prepared for this new diagnostic test.

The first essential part for this diagnosis is the technician—one to cut and stain the frozen section, or to make and stain the smear. The second is a pathologist trained to interpret it. It is possible for the surgeon to be all three in himself, and some young surgeons are so equipped. In others it is a dual combination—surgeon and pathologist in one, and the technician. More frequently it is three—operator, technician and pathologist. It makes little difference whether it is one, two or three individuals, providing each has the equipment and training for this most difficult diagnostic test.

In the address as chairman of the surgical section of the Southern Medical Association, I discussed biopsy, and this paper has been published in the Southern Medical Journal for January 1927 (Vol. XX, page 18). A reprint of this paper will be sent to anyone on request. The chief object of this letter is to come in contact with surgeons and pathologists who are sufficiently interested in this problem to discuss it either by correspondence, or by attending a meeting in the surgical pathological laboratory of the Johns Hopkins Hospital, either the Monday before, or the Friday after the meeting of the American Medical Association in Washington.

Schools for technicians may have to be established in different sections of the country, and the surgical pathological laboratories of the medical schools and the larger surgical clinics should offer courses in this tissue diagnosis, so that surgeons may learn to become their own pathologists, or pathologists learn the particular needs of the surgeon in tissue diagnosis in the operating room.

It is quite true that when the majority of the public are fully enlightened, the surgeon will see lesions of the skin and oral cavity and the majority of subcutaneous tumors when they are so small that their complete excision is not only indicated, but possible without any mutilation. The chief danger here will be a surgical mistake—the incomplete removal of an apparently innocent tumor. There is no necessity here for biopsy. If a proper local excision is done, no matter what the microscope reveals, that local operation should be sufficient. But when lesions of the skin, oral cavity and soft parts are extensive and their complete radical removal mutilating, then there must be biopsy to establish the exact pathology.

In tumors of the breast and disease of bone, for years, the diagnosis could be made clinically, or from the gross appearances of exploration. But now, an increasing number of cases, the breast tumor must be explored, and the gross pathology of this earlier stage is not sufficiently differentiated to allow a positive diagnosis. Immediate frozen sections are essential to indicate when the complete operation should be done. The same is true of the earlier stages of lesions of bone. The x-rays no longer make a positive differentiation between many of the benign and malignant diseases, for example, sclerosing osteomyelitis and sclerosing osteosarcoma.

We must not only specialize in tissue diagnosis, but we must organize this department so that it will function properly in as many operating rooms as possible in this country.

Then there is a final and most difficult question to consider. I doubt if it can be settled. What shall be done in those operating rooms in which there is no technician to make the sections and no one trained to interpret the microscopic picture How can a piece be excised or a tumor removed, for example, from the breast, and this tissue sent to some laboratory for diagnosis without incurring the risk of the delay to the patient? I have discussed this point in my paper on biopsy.

JOSEPH COLT BLOODGOOD
Surgical Pathological Laboratory, Johns Hopkins Hospital.

SOCIETIES

SEDGWICK COUNTY SOCIETY

The regular monthly meetings of the Sedgwick County Medical Society are held on the first and third Tuesdays of the month in the Grill Room, Lassen Hotel, at 6:30 P. M.

The meetings are well attended and many instructive and interesting papers are read and discussed.

The members of the staff of St. Francis Hospital gave the program for the first meeting of February 1st: Dr. J. G. Missildine read a paper on "Pain in the Back and Kidneys," illustrated with lantern slides. Dr. R. A. West read a paper on "Kielland Forceps." Dr. D. W. Bashman had a paper on "Bacteriology of the Gall Bladder." Dr. C. A. Hellwig had a paper on "Classification of Goiter." Dr. Arch Jones gave a case

report on Perineorrhaphy. Dr. J. F. Gsell gave a report on Retino-Blastoma. Dr. W. G. Gillett talked on the pathology of Retino-Blastoma. Dr. Martin Hagan gave a case report on Actinomycosis.

At the meeting on February 15th., the members of the staff of Wesley Hospital had charge of the program: Dr. H. Tihen read a paper on four pathological cases, giving the autopsy findings and showing specimens of the same. Dr. A. L. Crittenden read a paper on Jejunum Ulcer. Dr. E. H. Terrill read a paper on Syphilis of the stomach and gave a case report, also showing x-ray pictures of the same. Dr. G. F. Corrigan read a paper on Malarial Treatment of General Paresis. Dr. G. R. Little gave a case report on Botulism. Dr. A. E. Bence read a paper on some of the more common causes of Low Back Pain, showing x-ray films of the same. Dr. Chas. Rombold talked on the Anomalies of the Lower Spine showing x-ray films and plaster of paris models.

W. J. Eilerts, Sec'y.

STAFFORD COUNTY SOCIETY

Society met in St. John at the Christian Church Wednesday, Jan. 12th at 7:00 P.M. Members present F. W. Tretbar, J. J. Tretbar, T. W. Scott, Stafford; M. M. Hart, Macksville; R. E. Stivison, L. E. Mock, J. T. Scott, St. John. Dr. E. D. Ebright, Wichita, was the guest. A luncheon was served at 7:00 P.M. and at 8:00 P.M. a public address was delivered by Dr. Ebright who spoke on "What Can be Done for Crippled Chilren?" Dr. Ebright was accompanied by his wife and several members brought their wives. In spite of stormy weather a fair sized audience was present and gave close attention to the address. Dr. Ebright called attention to the wonderful advancement of scientific medicine in the last 70 years. How the span of life had been lengthened and most all plagues and infectious epidemics and endemics conquered. That there remained but one disease to conquer, cancer, and made the prediction that this would be accomplished within the next generation. He also made the rather startling statement that great engineering feats and the reclamation of vast areas of rich lands were directly due, not to engineering skill and financial and man power resources, but to the test tube and microscope. Thus it is evident that to the accomplishments of scientific medicine is due the credit for all these inestimable blessings.

In answering the question "What can be done for crippled children?" he said that engenics stood first. Begin by curtailing their production. During the present session of the Legislature a bill will be introduced providing for the construction and maintenance of a State Institution where crippled children may be sent and properly treated. This will provide adequate treatment for crippled children whose parents are unable to provide it.

This Society will hold, during 1927, a number of meetings to which the general public will be invited. Recognized Physicians of standing will be secured with the purpose of instructing the public regarding the accomplishments and purposes of scientific medicine. A new member was admitted, Dr. Linnie Haines, Macksville.

J. T. Scott, Sec'y.

CLAY COUNTY SOCIETY

The February Meeting of the Clay County Medical Society was held at the Clay Center Municipal Hospital, February 9, 1927. Attendance was small due to bad weather and rought roads.

Dr. Robert Algee of Clay Center was reinstated to membership in Clay County Medical Society.

Dr. T. G. Orr of the Kansas University Medical School presented a very interesting paper on Diseases of the Gall Bladder. General discussion followed with favorable comment upon Dr. Orr's paper.

G. B. McIlvam, Sec'y

REPUBLIC COUNTY SOCIETY

Dr. Stillman, Councillor for the Seventh District, recently reorganized the Republic County Society. He reports the meeting as follows:

"I drove up to Republic City last night (70 miles) and helped with the revivifying of the Republic County Society. We met at the office of Dr. D. E. Foristall, the occasion being his 74th birthday. After the meeting we went to his home where his good wife had prepared a most delicious lunch. Had ten physicians, two ministers and one dentist present. Had no set program. After a discussion and general agreement that permanent organization, regular meetings with fixed and definite line of procedure should be and would be strived for, there were some interesting and instructive clinical cases presented. The ministers were called upon for some remarks. These were offered and well received. Then the President, Dr. Nord-

strom of Belleville, presented on behalf of the Society a handsome bill fold to Dr. Foristall, together with many best wishes for happy returns. Dr. Foristall is indeed one of our old timers. He has practiced for almost fifty years.

"There were present: Drs. C. V. Haggman of Scandia; R. C. Matson, H. D. Thomas, W. I. McFarland, R. H. Munford and L. O. Nordstrom of Belleville; D. E. Foristall of Republic; Dr. Kauffman of Hardy, Nebraska; C. E. Earnest of Clay Center and C. C. Stillman of Morganville. Meeting balanced by two gentlemen of the cloth."

CENTRAL KANSAS MEDICAL AUXILIARY

The Central Kansas Medical Auxiliary met in regular session at the home of Mrs. C. D. Blake at Hays, Kansas, December 16, 1926, at three P.M.

Annual election followed and the officers elected for 1927 are: Mrs. F. S. Hawes, President; Mrs. Jonathan B. Carter, Vice President; Mrs. H. R. Bryan, Secretary; Mrs. C. D. Blake, Treasurer.

The Central Kansas Auxiliary has been organized three years and much interest is shown in the district. $20.00 was spent this year to make Christmas a happy time for needy children.

Following the business session a social hour was enjoyed by the members from Ellsworth, Wilson, Russell, Ellis, Natoma, Westmoreland, Hill City and Oakly.

At five o'clock tea was served by the hostess assisted by Mrs. Bryan and Mrs. Unrine of Hays. Decorations were beautiful in their appointment and in keeping with the season.

Mrs. Alfred O'Donnell, President K.M.A. gave a very interesting address.

At 6:30 the ladies were guests of the members of the Central Kansas Medical Society at a dinner given at the Brunswick Hotel and their evening program. The members of the Auxiliary enjoyed the address given by the President of the American Medical Association, Dr. Jabez N. Jackson, and the travel talk given by Dr. P. T. Bohan on his trip abroad, and a series of health pictures by Dr. Cave.

Adjourned to meet at Russell, Kansas, for the April meeting.

WILSON COUNTY SOCIETY

The Wilson County Medical Society held their regular monthly meeting at Altoona, Monday evening, February 14th, at the home of Dr. W. H. Addington.

After the routine business. Dr. Addington read an interesting and instructive paper on "Common Colds."

We then took stock of our toxin-antitoxin work here in Wilson County. The County Commissioners furnished the toxin-antitoxin and other supplies needed; the members of the County Medical Society had charge of the clinics and administered the toxin-antitoxin. We inoculated 1076 children, giving three doses to each; we had no bad results; we have had no complaints of any kind; no charge was made, the work being done free, the work was under Dr. W. H. Young, county health officer; harmony prevailed, and we believe the parents of this county are as well informed on disease prevention as any people in the state.

As far as we know, this is the first time a County Medical Society as a Society, has put on a clinic such as this, in Kansas.

The next meeting place was left to the Secretary.

NEW AUXILIARY ORGANIZED

The Norton-Decatur Medical Auxiliary was organized by Mrs. J. H. A. Peck of Saint Francis, Kansas, in January, at the regular medical meeting of the Norton-Decatur Medical Society.

RENO COUNTY SOCIETY

The Reno County Medical Society met at the Stamey Hotel, February 17th, for a 6:30 dinner.

No scientific program was given, but instead, the meeting was given over to the discussion of the plans relative to the coming State Medical Meeting.

The Committees are complete and are at work. It looks now, as though we were going to have a fine State Medical Meeting in May, as far as entertainment is concerned, end the scientific program promises to be as good or better than the average.

We feel particularly fortunate in having the new Masonic temple for our meeting place. It is planned to have all the departments of the meeting on the same floor, with splendid accomodations and plenty of room.

C. A. Boyd, Sec'y.

BOURBON COUNTY SOCIETY

The Bourbon County Medical Society met in regular session at the Library building, Fort Scott, February 21, 1927, with the following members present:

Drs. Crume, Cummings, Cavanaugh, Griffin, Gooch, Hunter, Harrac, Mosley, Newman, Payne and Wilkening.

Dr. H. E. Marchbanks, internist from the

Smith Clinic of Pittsburg, Kansas, and Dr. L. J. King, dentist of the same clinic, were visitors, also the following dentists of Bourbon County: Dr. Ramsey, of Uniontown and Drs. Brant, Lesher, Snider, Chapman, Werner and Rollings of Ft. Scott.

A resolution was adopted asking our representatives in the Senate and House to support the "Basic Science Act."

Drs. Hunter, Payne and Cavanaugh were appointed on a committee to select the lectures to be given before a lay committee in the near future.

Dr. L. J. King read a very interesting and instructive paper on "Dental Diagnosis," which was freely discussed by all present. Dr. H. E. Marchbanks read a paper on "Peptic Ulcer," a very comprehensive paper, showing considerable thought and efforts in its preparation. This paper was discussed and a vote of thanks extended to Drs. Marchbanks and King.

W. S. Gooch, Sec'y.

SEDGWICK COUNTY SOCIETY

The program of the meeting of March 1 of the Sedgwick County Medical Society was given by the members of the staff of the Wichita Hospital in the form of a symposium on arthritis. Dr. W. G. Rinehart read a paper on the causative factors of arthritis, Dr. C. H. Briggs on the classification and pathology of arthritis, Dr. H. H. Olsen on diagnosis and symptomatology and Dr. E. D. Ebright on treatment of arthritis. Lantern slides were shown. These papers were freely discussed by the members present.

The members of the local Dental Society, as well as a number of out of town physicians and surgeons, were guests of the Society.

The program of the next regular meeting, March 15th, will be given by Dr. J. G. Dorsey and associates of Wichita.

W. J. Eilerts, M. D., Sec'y

SHAWNEE COUNTY SOCIETY

February 7, 1927

The regular monthly meeting of the Shawnee County Medical Society was held at Pelletiers Tea Room, Monday evening, February 7, 1927. Dr. Harry L. Alexander was the guest of the society and presented a paper on Agina Pectoris at 5:30, with approximately 85 members in attendance. Dr. Alexander discussed the subject thoroughly taking up especially the causes and the treatment. This paper was followed by a dinner for the members and guests. The guests included Dr. R. J. Morton of Clay Center, Senator from Clay County, Senator J. S. Norman from Doniphan County, Dr. J. L. Parkhurst, Representative from Allen County and Mr. C. C. McCaughan, Representative from Butler County.

Dr. Alexander's second paper was given following the dinner and was entitled Present Conception of Allergy. Dr. Alexander laid especial emphasis on the fact that diseases classed as allergies were hereditary.

Dr. W. M. Droll of Alta Vista and Dr. Claude C. Tucker of Nortonville were elected to membership.

Earle G. Brown, M. D., Sec'y

March 7, 1927

The regular monthly meeting of the Shawnee County Medical Society was held at St. Francis Hospital Monday evening, March 7, 1927. Dr. Paul E. Belknap presented a clinical case of Celiac Disease. Dr. G. H. Litsinger presented six cases of Chronic Otitis Media and discussed thoroughly the clinical symptoms and methods of treatment. Dr. Litsinger emphasized especially the importance of early diagnosis and treatment.

At the February meeting a special committee had been appointed to make a report relative to contract or lodge practice. The report was given by the committee of which O. P. Davis, M. D. was chairman. J. H. O'Connell, M. D. submitted a minority report. The society voted not to accept the report.

Dr. J. F. Northrup of Topeka, Dr. J. W. Lauck of Maple Hill and Dr. F. C. Stewart of Eskridge were elected to membership.

Earle G. Brown, M. D., Sec'y.

NORTHEAST KANSAS SOCIETY

The annual meeting of the Northeast Kansas Medical Society will be held at Topeka, on Thursday, March 24, 1927. The entire program will be given over to a demonstration of clinical cases.

Earl G. Brown, M. D., Sec'y.

MEDICAL SCHOOL NOTES

Dr. C. C. Hamann, Dean of the Western Reserve Medical School, talked to the Senior and Junior classes, Saturday, January 22nd.

Dr. F. C. Helwig spoke on "The Value of Histologic Examination of Cancer as an Aid to Prognosis and Treatment" and Dr.

E. C. Padgett spoke on "Full Thickness Skin Grafts" before the Wyandotte County Medical Society, February 15th.

Dr. J. E. Welker addressed the Medical Society at Iola, Kansas, at its January meeting.

Dr. A. S. Welch read a paper before the Nodaway County Medical Society, at Maryville, Missouri, on 'Pernicious Anemia," February 11, 1927.

Dr. A. L. Skoog addressed the Sedgwick County Medical Society at Wichita, at its January meeting on the subject "Neurological Phases of Pernicious Anemia."

Dr. Thomas G. Orr addressed the Clay County Medical Society, at Clay Center, Kansas, February 9th, on "Gall Bladder Disease."

Dr. L. G. Allen read a paper before the Academy of Medicine February 11th, on "Visualization of the Bronchi."

The Senate Ways and Means Committee was entertained at a luncheon on Friday, February 11th, at the Grund Hotel, and at a dinner in the evening at the Kansas City Club.

The House Ways and Means Committee was entertained at the University Club and at the Orpheum Theatre, Saturday evening, February 12th.

Dr. Lawrence S. Nelson, of Salina, Dr. Alfred O'Donnell, of Ellsworth, Dr. C. Ferdinand Nelson, of Lawrence, and Dr. Carmichael, of Osawatomie, were in Kansas City, Friday, February 11th, attending the meeting of the Ways and Means Committee.

Letters are being sent out to the members of the K. U. Alumni Association of the State urging them to communicate with the Senator and Representative from their County in regard to the appropriation for the Medical School.

Dr. Russell L. Haden read a paper on "Focal Infection" before the Pittsburgh Diagnostic Clinic, Wednesdty evening, February 2nd, at Pittsburgh, Pennsylvania.

DEATHS

Dr. Benjamin Franklin Morgan, Clay Center, aged 69, died February 28, of myocarditis. He graduated from Drake University College of Medicine, Des Moines, Iowa, in 1888. He was president of the Kansas Medical Society at the time of his death.

Dr. Frank B. Taggart, Independence, aged 45, died January 27 of brain tumor. He graduated from the Kansas City Medical College in 1904. He was a member of the Society.

Dr. E. B. Packer, Osage City, aged 71, died February 6. He graduated from the Eclectic Medical College, Cincinnati, in 1884. He had been a resident of Osage City for 56 years and a physician for more than 40 years.

Dr. John Orr Milner, Kansas City, Kansas, aged 65, died December 3, of cerebral hemorrhage and arteriosclerosis. He graduated from the University Medical College, Kansas City, Mo., in 1887. He was at one time a member of the State legislature and was formerly on the staff of St. Margaret's Hospital. He was a member of the Society.

Dr. Bud Smith, Leavenworth, aged 66, died November 20, 1926. He graduated from the Kansas City Medical College in 1886. He was also a druggist.

BOOKS

A Primer for Diabetic Patients. A Brief Outline of the Treatment of Diabetes with Diet and Insulin, Including Directions and Charts for the Use of Physicians in Planning Diet Prescriptions. By Russell M. Wilder, M. D., Section on Nutrition, Division of Medicine, Mayo Clinic. Third Edition, Reset. 12mo of 134 pages. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $1.50 net.

The necessity for regulating the diet in diabetes, now that insulin has made long life possible to the victims of this disease, has not been removed. Although starvation or under nourishment are not required, the planning of diet and weighing of food are just as important under insulin treatment as before its advent.

Dr. Wilder has prepared this book for the use of physicians in planning diets for such patients.

The Medical Clinics of North America (Issued serially, one number every other month.) Volume X, No. LV, (New York Clinic Number, January, 1927.) Octavo of 327 pages with 31 illustrations. Per Clinic Year, July 1926 to May, 1927. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

The New York number of the Clinics has been received. There is a symposium on gastric and duodenal ulcer that is instructive. Held presents a clinic on anemia.

Miller discusses anhemolytic streptococci in the blood stream. Graves and Perkins have an article on routine x-ray of thymus in surgery. Mosenthal and Klemperer discuss the subject of subacute nephritis. Myerson has a clinic on syphilis of the esophagus. Ornstein's clinic has to do with the recognition of breath sounds and Bullowa's clinic is on traumatic pneumonia. King has an article on the action of urea and high protein diets. Donaldson discusses diseases of the liver and biliary tract. There are many other equally interesting articles in this number.

Four Thousand Years of Pharmacy, an outline history of pharmacy and the allied sciences by Chas. H. LaWall, Ph. M. Phar. D., etc. Professor of Theory and Practice of Pharmacy and Dean of the Philadelphia College of Pharmacy, etc. Published by J. B. Lippincott Co., Philadelphia. Price $5.00.

This is an intensely interesting book to students of medicine as well as pharmacy. The author says that "the earliest records of pharmacy go back to the days before Tutankhamun, who was laid away in regal splendor in the Valley of the Kings in that country where Isis and Osiris were the dominating deities. The oldest prescriptions were found in the hieratic writing of ancient Egypt." There are many very interesting illustrations.

This Business of Operations, by James Radley, Published by The Digest Publishing Company, Cincinnati.

This is a story, written by himself, of a man whose antipathy to doctors, surgeons and hospitals led him to postpone proper medical care until a collapse brought him to a hospital for operation; and the reformation in his attitude is strikingly presented. From an antagonist he became an enthusiastic admirer and worker for the profession and hospitals in particular.

It would be a good plan for the hospitals and the surgeons to keep on hand a supply of these little books and hand them out to patients who are contemplating a stay in the hospital.

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Motion Pictures and Eyes

"Motion picture theatres are too dark," Guy A. Henry, of New York, General-Director of the Eye Sight Conservation Council of America, declared in a statement made public yesterday. "People are unnecessarily subjected to eye strain," he asserted, "in poorly lighted auditoriums."

Investigations reveal that managers of motion picture theatres have no method of determining the effectiveness of the lighting," said Mr. Henry, who urged the framing of a special code of illumination for motion picture auditoriums, following a scientific study of the problem.

"The human eye does not function to its best advantage in the dark or in looking at a fairly well illuminated object when the eye itself is surrounded by darkness," according to Mr. Henry. "There should prevail as high a degree of general illumination as may be consistent with securing clear and easy vision of the picture.

Too low illumination causes dilation of the pupil to an abnormal degree and provides a coreal area which does not permit of focal accuracy and which tends to distortion of outline. To partially overcome this, segmental action of the ciliary muscle governing the focusing of the eye is induced. Such muscular action can be attained only by great effort.

"There is also strain of the iris muscles resulting from the prolonged dilation of the pupil and another objection is that the varying intensity of the light reflected from the screen requires constant iris action more difficult of accomplishment than under normal dilation.

"There is constant conflict between the extreme darkness surrounding the eye and the light reflected from the screen. Under such a condition the eye is not only more susceptible to the natural varying intensity of the light from the screen, but the adaptability of the eye is lowered and the slightest flicker or movement is more noticeable and detrimental.

"The illumination of the auditorium should be gradually reduced from the rear to the front and all light sources so modified as to prevent glare, especially those which may fall within the spectator's range of vision. A faulty shade leaking a little light in the orchestra or over the organ will be a source of annoying glare for even though the intensity of the reflected light from the screen may be much greater, the direct light by reason of the dark background will by contrast be blinding in effect and harmful to the eye.

"The decorative scheme of the auditorium naturally affects the general illumination. Gilt and silver even in subdued light may produce annoying reflections and, in some instances, these are responsible for an unfortunately low degree of lighting.

"A flock of gilt or silver cupids floating around for decorative effect may produce annoying reflections when the lights are dimmed. Instead of reducing illumination

to obscurity it would be better to invest these nude little angels with a coat of dull bronze or to so cover them as to permit of a proper degree of general illumination.

"All surfaces which might produce reflections should be guarded against. Light brackets on walls and chandeliers should be dull finished.

"At intermission or changes in program when the general illumination is turned on the current should be carefully gauged and the auditorium gradually brought from a state of semi-darkness to full light. A sudden or too rapid turning on of light is not only irritating but may be decidedly harmful to the eye.

"Investigations reveal that managers of motion pictures have no scientific way of determining whether or not the general illumination of the auditorium is what it should be and, in fact, this is governed by the judgment of the management which may take into consideration certain factors and entirely disregard others of equal or greater importance.

"Practical tests and measurements are reported which demonstrate the feasibility of sufficient general illumination of the auditorium during the showing of the film to permit reading of program and this without detracting from definition or causing loss of quality in the picture showing on the screen. Valuable studies have been made but, unfortunately, are not followed or in general practice in motion picture theatres. One such report states: "By proper distribution of the light, the general illumination of the interior of a motion picture theatre may be raised to a considerable extent above the values in common use without causing any appreciable loss of quality in the projected picture."

"A scientific study should be made of this problem and standards of illumination established for the guidance of the managers so that they may be sure that a matter so important as the general illumination of the theatre during the showing of the picture is scientifically correct and that the eyes of their patrons are not being subjected to strain.

"In fact there should be developed a special code of illumination for motion picture auditoriums which will cover a field which is too important to be left to the judgment of individuals."

Hospital Clinical Congress

Marquette University College of Hospital Administration has announced plans for the holding of the Hospital Clinical Congress of North America the week of June 20 to 24 inclusive, in Milwaukee.

The Rev. C. B. Moulinier, regent of the College of Hospital Administration, in making the announcement, stated that Marquette University has been working for some time preparing for the congressional exposition. The plan is to set up in the Auditorium in Milwaukee complete working exhibits of modern hospital equipment and demonstrate their use under actual conditions. It will be the first attempt to institute a "working" clinic, demonstrating the most modern advances in hospitalization.

There will be four distinct departments: Hospital, Public Health, Safety and Research. The Congress will be vitally interesting to all persons interested in hospitalization; hospital superintendents, staffs, trustees, nurse superintendents, engineers, architects, dieticians, those interested in safety, first aid industrial hospitalization; public health leaders, welfare workers, both public and private.

Special clinical teams will be supplied by hospitals for the demonstration. Each department will be under the special direction of a clinical director, who will be chosen from among the foremost specialists in their respective fields. The directors will have charge of the demonstrations and the departments for the entire period of the congress.

Night meetings will be held which will be open to the public, aiding in the education of the public on questions of hospitalization. Among the speakers will be outstanding leaders in public life, the professions, business, industry and education.

The Auditorium with its ampitheatre type of seating, is especially suited to the clinical demonstration. It is so arranged that each group can be comfortably seated and can see and hear all demonstrations and discussions in each division, and a number of these clinics can be conducted simultaneously.

Is There a Standard Suprarenal Extract?

The pressor principle of the adrenal medulla is best known by its original name—Adrenalin—the name given it by its discoverers in 1900. A variety of other names have been invented to describe this active principle as offered in commercial form by other houses; but when the term "Adrenalin" appears in print it is associated in the

reader's mind with the house of Parke, Davis & Company.

Adrenalin is not made by synthetic means; it is the natural product derived from suprarenal glands, and the natural product is levorotatory. Parke, Davis & Company stress the fact that their manufacturing process not only yields the levorotatory (active) extract, but also that the process is so designed as to **keep** that extract in its active levorotatory condition. See their advertisement elsewhere in this issue.

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A. C. S. Meeting

The sectional meeting of the American College of Surgeons for Missouri and Kansas will be held at Hotel President, Kansas City, Missouri, March 28-29.

The following tentative program has been announced:

Monday, March 28th, 1927

9:00 A. M.—Clinics and Clinical Lecture at St. Luke's and General Hospitals.

11:30 A. M.—Clinical Address at Hotel President.

2:00 P. M.—Hospital Conference at Hotel President.

4:30 P. M.—Meeting of Fellows of College and Election of Officers.

7:00 P. M.—Dinner at Hotel President, followed by Social Program.

Tuesday, March 29th

9:00 A. M.—Clinics and Clinical Lectures at St. Luke's and General Hospitals.

11:30 A. M.—Clinical Address at Hotel President.

2:00 P. M.—Scientific Session at Hotel President.

8:00 P. M.—Community Health Meeting. (Ivanhoe Masonic Temple, Linwood Boulevard and Park Avenue.)

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Scars

A new triple technic for reducing disfiguring cicatrices to a degree of invisibility amounting to practical removal is described by James Francis Grattan, New York (Journal A. M. A., Feb. 26, 1927). Roentgen-ray irradiation, local application of trichloracetic acid to all elevations to reduce them to the normal skin level and careful excision and resuture of a disfiguring scar is the procedure adopted by Grattan in more than 1,000 cases with satisfactory results. The standardized technic has been called the triple technic for scar reduction because of its three elements: surgery, roentgen ray and acid. Immediately after the removal of the subcuticular suture the roentgenotherapy is begun. The first treatment consists of one-half skin unit unfiltered (8 inches skin distance, 5-inch spark-gap, 60 seconds). The second treatment consists of one-fourth skin unit unfiltered, in seven days (same setting of machine, 30 seconds). The third treatment consists of one-fourth skin unit, unfiltered, in ten days. The fourth treatment is given after a fourteen day rest period. It consists of one-half unit, filtered through 1 mm. of aluminum. The fifth treatment is given after a ten day interval. It consists of one-fourth unit, filtered through 2 mm. of aluminum. The sixth treatment is given after a seven day interval. It consists of one-fourth skin unit, unfiltered. A month's rest is given to allow the well known delayed effect of the roentgen ray to complete its action before the third step of the triple technic is started. This consists of acid treatment of any elevations in or around the remains of the hair-line scar, to effect leveling and to eliminate "shadowing." The patient is so placed that a strong white light strikes the surface at an angle approximating 45 degrees. This throws the elevations above the surface into distinct relief. A wire probe is dipped into the deliquescent fluid of the pure trichloracetic crystals and with the maximum of care against a running excess of the fluid on the probe, the acid is spread over the elevation only. As soon as the surface of the treated area turns a dead white, cotton sataurated with cold water is spread on in a thin transparent sheet. If so applied the cotton will stick without being held in place. The wet film of cotton should be allowed to remain in apposition with the acid-treated area for five minutes after the "sting" of the acid has subsided. Borated talcum powder may be dusted around the treated area to reduce the contrast between the dead white acid effect and the normal skin, or the standard calamine and zinc lotion may be used. The white acid-treated area remain so for two days, and then gradually discolors into a typical brown scab. This separates itself at its edges and should be permitted to curl itself off gradually with little if any mechanical urging. When the raised area has been brought down, by one or two treatments with the full strength deliquescent fluid of the crystals, to a plane just above the normal of the surrounding surface, 50 per cent dilution of the acid is used for the subsequent application, and 10 per cent for the final "smooth-

ing" treatment. From seven to ten days should elapse between the consecutive applications to prevent excoriation at any time. When the desired degree of level ing has been obtained, the acid applications should be discontinued until the pink areas left by the separations of the scabs have returned to normal skin color. The true result is then evident. It is, in 90 per cent of cases, beyond the expectations of both patient and operator.

Annual School for Health Officers and Public Health Nurses

The Annual School for Health Officers and Public Health Nurses, conducted by the State Board of Health will be held at Topeka, April 11-14. All sessions will be held in Representative Hall.

The following program in part has been secured:

Dr. Don M. Griswold, Epidemiologist and director of Laboratories, State Board of Health of Iowa, and former secretary of the Board.

1. Disinfection after Infectious Diseases.
2. Rabies Control by Communities.
3. Tularemia and Malta Fever in the Middle West.
4. Communicable Disease Prevention in Small Country Schools.

Dr. John F. Anderson, Director of Laboratories, E. R. Squibbs and Sons.

1. The Preparation, Testing, Storage and Use of Biological Products.

(With moving pictures)

2. The Control of the Streptococcic Infections.

Dr. P. W. Covington, International Health Board.

1. Rural vs. Urban Health.
2. Activities of a Full Time County Health Department.

Dr. A. J. Chesley, Secretary, State Board of Health, Minnesota.

Subjects to be announced later.

Dr. Allan J. McLaughlan, U. S. Public Health Service.

Subjects to be announced later.

Jessie Ross Royer, R. N., National Committee for the Prevention of Blindness.

1. Determining Visual Acuity before Letters are Learned.

(A practical demonstration)

2. Conservation of Vision, The Public Health Nurse's Part as a Pioneer.

Mary Elizabeth Tennant, R. N., Metropolitan Life Insurance Co.

1. The Opportunities for a Public Health Nurse.
2. The Nurse's First Visit.

Members of the medical and nursing profession are invited to attend any or all sessions of the school. There is no fee for the course.

There will be a spceial meeting of the Shawnee County Medical Society on Monday evening, April 11. Dr. Griswold will present a paper of The Prevention of Scarlet Fever.

Earle G. Brown, M. D., Sec'y.
State Board of Health.

Diathermy in Production of Temperature

Experiments on animals, culture studies and actual temperature measurements in patients treated by diathermy under the commonly approved technic were made by Ralph Boerne Bettman and Nathan N. Crohn, Chicago (Journal A. M. A., Feb. 19, 1927), for the purpose of determining the mode of action and effect of this procedure on the skin. They employed cases of lung abscess and empyema, and patients in whom appendectomy, nephrectomy, cholecystectomy and gastrostomy had been done. They were not able to produce an appreciable rise in the deep temperature readings in any case in which the tissue temperature measured was deeply beneath the chest or the adominal walls. In two cases in which the electrodes were large and the current was applied for a long time, the temperature was slightly raised, and this was accompanied by a corresponding systemic rise in temperature (rectal). It is stated however, that skin effect is a factor in clinical diathermy; just how important a factor the authors are at present unwilling to state. The production of heat is commensurate with the localized density of the current. It is possible to focus the site of heat in any given internal viscus. a given locality the lines of current. With the present day routine application of the electrodes, it seems impossible to focus the site of heat in any given intrnal viscus. Factors pointing against a central heating of tissues include a consideration of: 1. Current density, which is ordinarily greatest near electrodes, regardless of the frequency or the nature (whether direct or alternating) of the current. 2. Skin effect, which is dependent on relative specific resistance and specific conductivity of tissues. It is probable that this is an important factor in keeping the current near the surface of the body. 3. Heat equilibrium of the body, which tends to prevent lasting deep local heating. 4. Failure to demon-

strate experimentally actual localized deep tissue heating. The indiscriminate placing of equal sized electrodes opposite each other does not guarantee the actual penetration to any great extent of a material amount of high frequency current, and under such conditions the ability of diathermy actually to raise appreciably the temperature of a selected deep organ in the chest or abdomen is questioned. As to the value of the employment of diathermy in extremities in such conditions as fracture or arthritis, when it is believed that heat with its resultant hyperemia will beneficially affect the physiology or pathology of the part, it is probable that to some extent a more efficient heat can be applied to the bone surface by means of diathermy. For such purposes, appropriate application of the electrodes is necessary. When the two electrodes are placed on opposite sides of the chest or abdomen, as is usually practiced in clinical diathermy, it is the opinion of the authors that the greatest amount of heating takes place near the electrodes and that the deeper portions of the body receive a proportionately small amount of current.

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A Letter

To the Journal of the Kansas Medical Society:

The Ottawa County Medical Society's report in the December, 1926, number of this Journal, by its efficient Secretary, Dr. J. F. Brewer, had an unique and humanizing feature in it. It seems to me when the accodmmodation can be had, it is ideal—and that is in having a dinner at the home of some member and the program of the meeting discussed. It is a commingling of the social, professional and scientific features in life and creates a unity of sentiment for the betterment of each attendant. Such meetings make and form new acquantances and friendship—attune a unison in an often discodant element in the professional community and harmonize. When a man's physical wants are satisfied he is at ease, and in a receptive and dispensive mood. Ultra scientific stunts may have a place in the average medical society meeting, but their utility, application and technique should be left to their originators to work out their practical application.

A feature of the Stafford County Medical Society as reported by J. T. Scott, was in taking the public into consideration. When the public is properly approached it will respond, and it is the way to get the public ear. True, the public has not been excluded from Medical Society meetings, but it has been, "yes, we (the doctors) are having a meeting in blank hall today and I must attend"—instead of "I am going up and would be pleased to have you (the layman) go with me." Exclusive and seclusive, unintentionally. But, the effect was the same, creating a distinction, putting up a barrier and estranging the public and isolating the profession. Stafford has the idea.

Another familiar face at the Stafford meeting was that of Dr. Axtell. I take it for granted that it was the original John T. Axtell of Newton, Kansas. He has been a permanent fixture, helper and builder in the medical profession in Kansas and the middle west for the past forty or more years. He was, and is, an aggressive and progressive factor in maintaining the professional standing of medicine.

Dr. John and I did not know much about diet, dietetics, calories, vitamins—A, B, C, D, E,—the most we knew about diet was that it was **Food.**

THE PRODIGAL

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Carbon Arc Radiation

R. Plato Schwartz, Rochester, N. Y. (Journal A. M. A., Feb. 26, 1927), gives a description of a new high-intensity arc obtained from a carbon lamp giving off radiation comparable to sunlight, and of its clinical use. The progress of patients was carefully checked by routine examinations of various sorts. The lamp was developed in the Taft Heliotherapy Ward in the Cincinnati General Hospital. It consists of four arcs arranged in a circle around a central support and held at an angle parallel to that at which the patients are treated. This design provides for the equal distribution of radiation in the treatment circle which has been 14 feet in diameter with the lamp suspended 8 feet above the center, while the inclination of the arc places the patient in the optimal position for receiving the greatest amount of radiation at any angle of 90 degrees from the source. Each arc operates at 90 amperes and from 68 to 70 volts on a 220 volt direct current, ammeter and volt meter giving constant reading which provides accurate measurement of the current used on each arc. The four arcs operate in pairs which are connected in series and are controlled by a knife switch which sends the current through the respective resistance unit. A 300 ampere circuit breaker is placed between the main line and the switches controlling each pair of arcs. Both the clinical and labora-

tory evidence of progress made by the patients since Oct. 13, 1924, indicated that the physical characteristics of the solar spectrum in a clear atmosphere had been closely approached, and the results of measurements not only support this indication but reveal a greater intensity for the region from 250 to 560 millicrons, with ordinates divided by 2½, than is present in sunlight at an altitude of 5,670 feet. The stimulating effect experienced by patients after treatment is probably favored by the relative lower intensity beyond 560 millicrons.

Studies in Human Inheritance

The medicolegal application of hereditary human characters in cases of disputed parentage, with special reference to the blood groups, is discussed by Laurence H. Snyder, Raleigh, N. C. (Journal A. M. A., Feb. 19, 1927). The blood groups, which have receeived most publicity as medicolegal aids, present a case in point. It has been shown that the blood groups are probably not inherited as two indepeendent pairs of factors, but as a series of three multiple allelomorphs. This changes to some extent the medicolegal application of the groups. It does not invalidate any previous test, but makes the application even more strict. It limits the groups of the remaining parent to a smaller number of possibilities in cases in which a parent of group IV is involved. Only in such cases involving a parent of group IV is any change made. A table is given, showing all possible cases in which the blood group test can be used. In addition to the blood groups other simple factors may be used in determining parentage. Eye color is one of these. Blue eyes are recessive to dark eyes (brown or black). Blue eyed parents always have blue eyed children. Gray (hazel) is apparently a third allelmorph in the series, recessive to dark, but dominant to blue. Eye color may be used in determining parentage. Another instance in which a human character lends itself to medicolegal application is the direction of hair whorl in the occipital hairs, clockwise is dominant over counterclockwise. Snyder says that by gradually accumlating such tests, the determination of disputed parentage will become more and more accurate. A man who fails in several such tests can be considered without doubt as not being the father, but the true father can never be identified by such tests as these. It can sometimes be said that a certain man is not the father of the child; it can sometimes be said that he might be the father; but it can never be said that any man is the father.

Use of High Fat Diets for Constipation

The results of the high fat diet for patients with epilepsy led Florence H. Smith, Rochester, Minn. (Journal A. M. A., Feb. 26, 1927), to give it a trial as a means of combating the constipation of patients with other complaints, particularly those who were too sick or uncomfortable to consume an adequate amount of vegetables and fruits, and the following experiments were conducted. A group of approximately fifty patients with arthritis were treated first. A diet was then planned for them containing a minimal amount of bulk and fat to an amount of at least 225 Gm. They enjoyed the food served and ate it. The gain in weight was satisfactory. Cathartics were stopped, and normal bowel movements occurred daily. Usually three to five days are required to establish normal bowel habits by means of diets containing 225 Gm. of fat. The fuel value of the high fat regimen makes it particularly suitable for undernourished patients. Care must be taken to serve the food in a palatable, attractive condition. The milk and cream in the diet may be served in cream soups, cocoa, malted milk, eggnogs and ice cream. Warm, visible fat often disgusts the patient, but fat served very hot or very cold will be taken in amounts up to 250 Gm. daily when high fat feeding is desirable. In planning such diets, the vitamin and mineral content of the food selected must not be overlooked. The high fat diet was effective in the treatment of constipation in all properly controlled cases. The results were satisfactory in all except two cases in which the patients failed to co-operate.

Eggs and Milk as Antidotes Against Mercuric Chloride

Torald Sollmann, O. W. Barlow and M. S. Biskind, Cleveland (Journal A. M. A., Feb. 26, 1927), studied this problem experimentally. They state that in poisoning by mercuric chloride, prompt administration of eggs or milk would be useful to delay absorption and local action, provided they are followed by emesis or lavage, or preferably both if the stomach is full. The authors have been quite impressed with the difficulty, and sometimes the impossibility, of washing the stomach if it contains undigested food. Not only was it impossible to



The Diagnostic Department of Research Hospital

23rd & Holmes Sts., Kansas City, Mo.

The Diagnostic Department of Research Hospital was established in November 1924. Patients are received for diagnosis from reputable physicians. On completion of examinations, reports, which include the patient's history, physical examination, laboratory and x-ray reports, the findings of various specialists and the final diagnosis with recommendations for treatment, are sent to the patient's physician—in no instance will reports be given to patients. The fee includes all necessary tests and examinations. The following Departments are represented:—

Medicine, Surgery, Orthopedics, Neurology, Oto-Rhino-Laryngology, Ophthalmology, Urology, Dermatology, Gynecology, Obstetrics, Radiology, Pathology, and Electrocardiography.

For further information address:

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Very truly yours,

E. F. De VILBISS, M. D.,
Superintendent.

Office 917 Rialto Bldg., Kansas City, Mo.

withdraw the food, but by being sucked against the opening of the tube it prevented also the withdrawal of fluid. Raw eggs and milk precipitate the mercuric chloride about equally effectivly. Milk would have the advantage that it would spread more rapidly over the stomach and would therefore act more promptly. It may be best to aminister first a glass or two of milk, then several raw eggs, to increase the protein without too much bulk. Egg white does not have any advantage over the whole eggs. If the tablets have been swallowed dry, and if milk is not available, it would be advisable to administer half a glass of water just before the eggs, to prevent the cementing of the tablet by the egg white.

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Some Diagnostic Problems in Hip in Early Life

Eight cases of hip conditions occuring in early life are reported by J. Albert Key, St. Louis (Jour. A. M. A., Jan. 8, 1927). He states that hip conditions that differ widely in etiology may present practically identical clinical and pathological pictures. In many instances a correct diagnosis can be made only after months or years of observation under treatment, and occasionally it is not possible to mak an exact diagnosis. By guinea- pig inoculation and the examination of material removed at operation, one can determine whether or not the hip is tuberculous; but if the hip is nontuberculous, the pathologic report is usually chronic inflammation, and this aids but little in the diagnosis. Certain hip conditions tend to begin to cause symptoms in definite age periods. A recognition of this fact is of considerable aid in diagnosis. Many of the chronic obscure hip conditions that occur in children can be relieved by conservative treatment. Exploratory arthrotomy for the purpose of diagnosis is not justified until the condition has failed to respond to conservative treatment.

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Clinical Studies of Gastric Function

By use of the method described by Arthur L. Bloomfield and Chester S. Keefer, Baltimore (Jour. A. M. A., March 5, 1927), for the estimation of volume of gastric secretion, ph of gastric juice, and motility of the stomach, the average volume of gastric secretion in normal persons varied from 10 to 40 cc. per ten-minute period The ph of the gastric juice varied from 1.05 to 7.0. The emptying time of the stomach varied from twenty to more than ninety minutes. The volume of secretion and the acidity of the juice were practically constant on repeated examinations of the same person; motility varied greatly. A study of abnormal cases yielded characteristic results in only two types of disorder—gastric ulcer (high volumes, high acid values) and cancer of the stomach (low volumes and failure to secrete acid). A study of true cases of anacidity (from ph 6.0 to ph 7.0 failure to secrete acid after histamine) showed the condition to be relatively rare and usually associated with serious organic disorder of the stomach. "Anacidity," as revealed by titration with dimethyl, is a common occurrence often without clinical significance. Motility of the stomach was found to be very variable after a barium meal as well as after the alcohol test stimulus. Sodium bicarbonate (from 1 to 2 Gm.) exercised a quantative neutralizing effect on gastric acid, but did not stimulate or inhibit gastric secretion.

FOR SALE—The Victoria Sanatorium at Colfax, Iowa, 20 miles east of Des Moines. 60 room brick building, equipped for sanatorium. With famous Colfax mineral water as a foundation, it offers a wonderful opportunity for the right parties. Price and terms are right. Write for particulars to Citizens State Bank, Colfax, Iowa.

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EARLE G. BROWN, M. D.
President Kansas Medical Society, 1927

THE JOURNAL
of The
Kansas Medical Society

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A Study Of One Thousand Stillbirths.

EARLE G. BROWN, M.D., Topeka, Kansas

Read at the Annual Meeting of the Kansas Medical Society at Kansas City, May 4-6, 1926.

We believe there are very few subjects of vital interest that receive less consideration, than that of stillbirths. Approximately 1,200 occur each year in the State of Kansas, and many of this number could be prevented with proper instruction and medical care. It is generally agreed that we lose less women in childbirth than were lost in former years, yet the per centage of stillbirths remains practically the same, as is shown by a consideration of the statistics for the past ten years.

Year	Number of Births	Number of Stillbirths	Per cent
1916	41,163	1328	3.2
1917	38,611	1203	3.1
1918	39,696	1378	3.4
1919	37,146	1257	3.3
1920	40,466	1243	3.0
1921	42,493	1386	3.2
1922	38,496	1314	3.4
1923	39,705	1300	3.2
1924	38,273	1249	3.2
1925	37,718	1246	3.3

The standard birth and death certificates, such as are used in Kansas, are fairly comprehensive. The certificates are well planned and do not require a lot of unnecessary data. The average physician, however, in only a small proportion of certificates gives complete information relative to the stillbirth. It should not be considered that this information is required for personal reasons, but is used solely for the purpose of tabulating the vital information concerning life and death.

Rules and regulations pertaining to stillbirths state that "The stillborn children or those dead at birth, shall be registered as births and also as deaths, and a certificate of both birth and death shall be filed with the local registrar in the usual form and manner: the certificate of both to contain, in the place of the name of the child, the word 'stillborn.' A medical certificate of the cause of death shall be signed by the attending physician, if any, and shall state the cause of death as 'stilborn,' with the cause of stillbirth, if known; whether a premature birth; and if born prematurely, the period of uterogestation, in months, if known;- - - - - - -"

Again referring to the Rules and Regulations: "For purpose of reporting and issuing of certificates of birth and of death, the term stillbirth shall be applicable to any delivery of a dead infant or foetus, the developement of which indicates that it has passed the 28th week of uterogestation."

According to Dorland, a stillbirth is the "Birth of a dead fetus." In this study, a stillbirth is defined as a dead born issue resulting from seven or more months gestation. If the period of gestation was reported as less than seven months, the birth even though reported as a stillbirth, was classed as a miscarriage and as such, excluded from the study. Likewise, consideration in this study is given only to stillbirths of the white race. The one thousand stillbirths were not consecutive, i. e., certificate not giving necessary information, except as to age, were not included.

Of the one thousand stillbirths, 527 were males and 428 were females. Included were twelve pairs of twins, both stillborn and one set of stillborn triplets. In thirteen cases, one twin was stillborn and the other was a live birth. In 355 of the families, the stillbirth was the first born of the mother.

The period of uterogestation was given on only fifty certificates and the average showed the stillbirth eccurred at the end of 7.9 months. It could not be presumed that al stillbirths where the period of uterogestation was not given, could be full term, for in a number, prematurity was given as the cause.

In 348 stillbirths, both the father and mother were native born Kansans, while the father and mother of 46 were both of foreign birth. Twelve of the one thousand stillbirths were illegitimate.

The first classification was that of the ages of the fathers and mothers, our first consideration being that of the average age of all. Tabulations were also made where the fathers occupation was listed as merchant, miner, profession, farmer, laborer, truck driver and mechanic. Under the classification of professions, we listed ministers, teachers, attorneys, bankers and dentists. It is interesting to note that in no case was the occupation of the father given as a physician. The occupations listed represent 657 families. Other occupations given were small in number and no attempt was made to classify them.

Average ages of father and mothers:

	Father	Mother
All occupations	33.5 yrs.	28.2 yrs.
Merchant (28)	34.4 yrs.	30.5 yrs.
Miner (24)	33.6 yrs.	28.1 yrs.
Professions (20)	33.1 yrs.	30.6 yrs.
Farmer (415)	33.0 yrs.	28.7 yrs.
Laborer (135)	32.1 yrs.	27.9 yrs.
Truck driver (13)	31.0 yrs.	27.6 yrs.
Mechanic (22)	28.1 yrs.	25.1 yrs.

We were next interested in tabulating the numbers of births in the families as listed below.

Number of births by occupation of father:

	alive now living	alive now dead	Born Still born	Born Av'g. births
All occupations	1.7	0.4	1.2	3.3
Laborer	1.9	0.8	1.2	4.0
Miner	2.0	0.5	1.3	4.0
Farmer	2.0	0.3	1.2	3.6
Merchant	1.4	0.2	1.1	2.9
Truck driver	1.1	0.3	1.1	2.5
Mechanic	0.9	0.	1.1	2.0
Professions	0.4	0.15	1.0	1.6

Investigations carried on by the Children's Bureau of the U. S. Department of labor, have brought out the interesting fact that there is a striking relationship between the infant mortality rate and the father's earnings. It would seem on this basis, although our numbers are comparatively small and not estimated on a rate basis, that there would also be a direct relationship between the number of stillbirths and the father's earnings. Theoretically, the greater earning power of the father, the more often medical care and better attention is given the mother during the pregnancy. Likewise, it is more probable that domestic help will be employed in the home, especially during the latter months of pregnancy, and thus lighten the task of the expectant mother.

One hundred and fifty four of the stillbirths occurred in hospitals. Forty of the stillbirths or 8.3 per cent occurred in hospitals, with the occupation of the father given as a farmer. In all other occupations, where the stillbirths occurred in hospitals, the total was 114, or 20.0 per cent. It would seem, therefore, that less births in families of farmers occur in hospitals. It is, however, reasonable to assume that less number of births of dead children will occur in hospitals than live births.

Among the causes given, 648 or approximately sixty five per cent gave the single cause "stillborn" or "stillbirth" with no additional word of explanation. It was exceptional to find a certificate which stated the cause of the stillbirth as unknown.

The causes as given for the 352 stillbirths were:

	Number	Per cent
Premature	67	19.0
Difficult labor, malposition, contracted pelvis	47	13.3
Torsion, prolapse, etc., cord	39	11.0
Malformations, hydrocephalus	35	9.9
Breech presentation	34	9.6
Eclampsia	28	7.9
Detached placenta	22	6.2
Injury at birth	21	5.9
Placenta previa	15	4.2
Syphilis	11	3.1
Other diseases of mother:		
Tuberculosis	1	10.5
Influenza	5	
Malaria	1	
Enlarged thyroid	1	
Injury to mother	5	
Miscellaneous	20	

This study, we acknowledge as being far from complete, as all the information contained herein was derived from a study of the certificates. In considering the causes of stillbirths, as listed above, it would only seem reasonable to believe that a large per cent could have been prevented.

Undoubtedly, in many of the cases, the physician was called after labor had begun, and his only service was to deliver the dead fetus and give proper care to the mother. Under supervision during pregnancy many of the abnormalties responsible for stillbirths, would have been discovered and many of them corrected, resulting in the birth of a healthy living child. In others, circumstances would have arisen, over which the physician had no control. It does seem that the 3.1 per cent of stillbirths occurring as a result of syphilis is very small. Yet, under adequate treatment during the pregnancy, these could have been prevented.

Certainly the regular medical profession should educate the laity as to the necessity for proper care of the expectant mother during the pregnancy. As to the proper method of education, it is impossible for me to state.

CONCLUSIONS

The stillbirth rate for the State of Kansas has remained practically stationary for the past ten years.

Only a small per cent of stillbirths occur in hospitals, and it is possible with better hospitalization of expectant mothers, there

would be a decrease in the number of stillbirths.

Although a definite study was not made as to the economic status there is probably a direct relationship between the earnings of the father and the occurrence of stillbirths in his family.

Many of the stillbirths could be prevented if the pregnant woman were under adequate medical supervision during the pregnancy.

The regular medical profession should be active in the education of the citizens of Kansas in an effort to decrease the numbers of stillbirths occurring each year.

REFERENCES

Dorland-Medical Dictionary.
Infant Mortality Series, No. 9, U. S. Department of Labor, Childrens' Bureau.

The Part Time Health Officer

O. E. STEVENSON, M. D., Oswego

Read at the Annual Meeting of the Kansas Medical Society at Kansas City, May 4-6, 1926.

Public welfare demands that every physician, to a certain degree, shall be a health officer. No physician should accept the position of county health officer until he is familiar with the duties imposed on him by the laws, rules and regulations relating to public health. This being an appointive office and generally handled from a political standpoint, one is apt to have the same grievance that is characteristic of politics, that of creating interest in things of a medical nature. In my humble opinion, until health workers can be chosen without political regard, we will have this handicap.

I will give some experience and perhaps a little philosophy, in the meantime trying to show that this work should interest every physician in general practice. I became interested when, some five years ago we had an epidemic of sore throat in our community, very mild at the onset. Not much attention was paid it by some of our local physicians, being diphtheritic, however, it soon gained in virulence, and became so alarming that we asked the aid of the State Board of Health man in the control of the situation. He spent a week with us, helping in the quarantine, and in the meanwhile giving the parents the necessary information regarding the value of inoculation by toxin-antitoxin in preventing future outbreaks. Slips were sent out asking permission to give it to the school children under twelve years of age. We got a fairly good response, the School Boards through the State Board of Health, furnished the serum, and with the aid of two other physicians, most of the school children of Oswego, Labette and the Rural Schools within a radius of six or eight miles were immunized. We gave our services free, and after five years, out of nearly 1,000 children so treated, we have had very few cases of diphtheria. One girl, however, had two severe attacks, one requiring twenty-thousand units of anti-toxin; the last one only ten thousand, but having a frightful serum reaction both times, with high temperature, skin eruption and joint involvement. Of course we have an occasional sporadic case, these for the most part in those not inoculated. But we have in a measure controlled the diphtheria in our locality and while it has not been remunerative, I feel we gave a service to our community. The physician's first duty should be to conserve health, as among community interests none is more important than public health, and among community liabilities none more serious than preventable sickness. In 1921, one health officer in Kansas was enough of a diplomat to persuade his County Commissioners to purchase over nine hundred dollars worth of toxin-antitoxin at State Board of Health prices, with which he immunized the school children of his county, with the result that they have had only five cases of diphtheria since.

As Part Time Health Officer, one has many problems that are food for thought. Is there any reason why we cannot be proud of our achievements, and frank about our limitations; yet most of us are of the opinion that any form of publicity, or any article that appears in newspaper print as coming from a physician, violates the tradition of the profession and breaks the commandment of the code of ethics; may it not be that sometimes publicity is real service? With this idea in mind, and knowing that the schools, by supplementing the work of health workers, provides a natural place for the beginning of health education. I gave a health talk to the teachers and board members of the schools of Labette County at Oswego at their September meeting, 1925. Our County Superintendent thought well enough of what I tried to give them, that he sent reprints to every teacher and board.

Through the aid of another organization we were able to get a school nurse, who divided her time between the city and rural schools. She examined and weighed our children, at the same time trying to interest them in the practice of health habits. This should play an important part in moulding the future of our community, which

must be built on the health of our future citizens—the boys and girls now in our schools. To secure results, healthy boys and girls, teachers, doctors and nurses must join hands with health officers for healthier and happier childhood.

By law one of the duties of the County Health Officer is school inspection; this annual affair is no small job. This year a form was gotten out, whereby we have school sanitation score cards, putting it on a per centage basis, allowing 4 per cent for buildings as to location and construction, doors to open out; 2 per cent for cloak rooms as to size, lighting and ventilation; 2 per cent for walls and ceiling as to condition and coloring; 5 per cent for floors as to tightness, cleanliness, oiled or dustless cleaning; 5 per cent lighting, amount (window area 1-5 wall area), direction, left side or overhead, adjustable shades; 10 per cent ventilation, adequate floor space per pupil (30 square feet), artificial ventilation in satisfactory operation or good natural ventilation; 4 per cent heating, as to equipment, furnace or other device to distribute heat evenly (unjacketed stoves only score 0); 25 per cent, water supply, deep well unpolluted, (water analysis) shallow well or cistern, with water tight curb and top, unpolluted 20 per cent, unprotected well or spring 5 per cent, (no water supply on premises score 0); 10 per cent drinking facilities, bubbling fountain or closed containers located in school with individual cups, (common cups score 0); 4 per cent lavatory facilities, as to water supply, cleanliness and individual towels; 20 per cent on excreta disposal, as to adequate seats and urinals (1 seat to 9 girls; 1 to 15 boys), cleanliness of flush water closets. If outside privies, protection of excreta from flies and no soil pollution; 4 per cent play grounds, as to size, drainage, cleanliness and play equipment. We are particularly anxious that the toilets be fly-proof, and kept clean to conform to the state sanitary toilet law. In Kansas, three-fifths of our children receive their training in rural districts; to those of us who are familiar with conditions, we know that a great many of these schools do not score very high, the average so far being 66%. We believe that an adequate expenditure in this field wisely administered would yield large returns.

Another idea that is a good one, is the placing in schools of Health Charts, which have been revised by the Public Health service and which tabulate the contagious diseases, their incubation time, mode of contagion, symptoms, how long contagious, length of quarantine and other measures, disinfection and instruction to teachers and parents. The cost is quite nominal; $14.00 per thousand. They are well arranged, quite instructive and fit present day standards. This chart should be in every school.

Statistics often reveal food for thought, especially when they show unsuspected conditions. A Fellow American College of Surgeons, in getting up a paper, gathered some data for the year 1925 that is at least interesting. According to his figures; seven hundred and fifty dollars is the average income of the medical practitioner of today; ten years ago it was $1,100. Folks spent $2.50 per capita for patent medicine and only twenty-three cents per capita for physicians. Ninety per cent of the people do not spend a cent with us until they are seriously ill, and until they have been spending time and money on chiropractors and other irregular junk dispensors.

The country doctor is rapidly disappearing, with apparently no successor. Seven years in medical training at a cost of from eight to ten thousand dollars is too much. Our professional business cannot succeed on such a basis.

Make no mistake about this: Every physician should see that there is a definite trend toward preclinical or preventive medicine. No less an authority than Dr. George E. Vincent of the Rockefeller Foundation, states that future medical schools should be endowed to train physicians along these lines. That the physician of tomorrow may work with the normal as well as the pathologic. We are now turned out of medical schools with our heads crammed full of disease, but with a vacuum where our health center should be. We should have a better knowledge of the effects upon health of diet, exercise, mental attitude, recreation, etc., as well as family and social life. To use vernacular, we are now only veterinarians and grooms to the human race, whereas, we should be trainers and educators. Instead of gloating over some disease of decay, we should get our enthusiasm from some person or persons in whose education, training or life we have played a part.

We are probably partly to blame for some of this condition owing to that sacred tradition, that there is something unethical in meeting in a professional capacity any person who is not dangerously ill. We must meet individuals before they are patients; to do this we must study community topography, analysis of water supply, sewage,

disposal of refuse, vital statistics, milk supply, hygiene, ventilation of homes and work shops and sanitary work of all kinds.

We must in addition know how our people live, what is wrong with their diet, what affects their mental equilibrium, how susceptible they are to emotional appeals of various kinds. We should understand the psychology of the human mind, how to persuade our folks to do those things they should do, and leave undone those things we know are harmful.

We are all familiar with the law requiring report of contagious diseases each week. Every physician, by reason of his calling, should report his contagion, as every epidemic has its starting point from some delayed report, or unrecognized case, and consequent delay in preventive measures. Conflagrations and contagious diseases should be treated alike—the first consideration is to get the "alarm," the next is to extinguish them. Reports sent in after the patient is well or dead are worthless, they are ancient history; reports are like biscuits—they are best when hot. The list of reportable diseases in Kansas may seem to be unnecessarily long. That has been carefully checked, some may occur infrequently, but should they occur they are reportable.

CONCLUSION

Have tried to confine myself, for the most part, to the preclinical, but I would like to ask for better co-operation by all physicians, not only with part time health officers, but with the full time men as well, and with the Board of Public Health. We can all thus aid in the primary object by control and isolation to lessen the plagues of mankind.

On the other hand, I might add, that properly approached, every man, woman and child is a good prospect for the physician, who ministers to the well through preventive medicine, periodical examination and phrophylaxis. The time has come for doctors to give serious attention to the examination of all well persons who apply to them for counsel.

We now that pseudomedical practitioners thrive by exploiting superstitions, engendering fears and ignorance relative to the body in order and out of order, and by grossly discrediting scientific medicine with the masses, whenever and wherever possible. Since organized medicine is the only possible source from which the public can obtain correct information, why not get busy and close this gap by working for the welfare of humanity?

Twenty-four Hours With a General Practitioner

A discussion of scientific, economic and social problems of the physician.

By I. J. Wolf, M.D., Kansas City, Mo.

In the paper which I am here presenting I am giving some of the experiences and opinions I have formed in the course of 38 years of practice of medicine. I believe that if every physician would,, toward the end of his career, publish his experiences, the practice of medicine would be greatly benefited. And there is no physician, be he ever so humble or unknown, who cannot contribute his little grain of sand towards the great building of medical art and science, and thus do his share towards benefiting mankind permanently.

The message that this essay contains is especially intended for the younger members of our profession. It shows them the importance of hard work, the necessity to build up their own practice rather than to depend on referred work; the importance to keep up with the times, and last (but not least) the wisdom to pay attention to the economic side of the practice of medicine, to save every year part of their income, ,no matter how small, and to invest those savings in good 6 per cent securities rather than in quick rich schemes, oilwells, mines, and the like, so that when old age comes they are so fixed that the disappointments which are bound to come with age are eased by the feeling that you can weather the storm, no matter how violent.

Remember that conditions in the practice of medicine change every 25 years or more; that with the growing importance of preventive medicine and the spread of the idea of socializing medicine altogether, which even in this blessed country is not an impossibility, no one can fortell the state of affairs 25 or 50 years hence.

The title of this paper has probably suggested to you its contents. Its object is to take you around for twenty-four hours with a busy general practitioner and to make incidentally such remarks and comments as are deemed interesting and appropriate. I want to add that such a day's experience is by no means imaginary or artificial, but occurs often, especially during the winter months.

Most of the remarks and comments will be along therapeutic lines, for, after all, it is the treatment and cure of disease which is the principal function of the general practitioner, and which is most vital to the peo-

ple at large, and, if successful, helps to enhance the reputation of the physician.

Neither written records nor literature will be consulted or quoted, and only my personal experience and opinion, based on many years of study, observation and practice, will be incorporated. This, I feel, is a distinct advantage. I often wish that more of the medical books which decorate our bookshelves reflected the personality of the writers, instead of being merely compilations and conglomerations of everybody's opinions, leaving it to you to guess what the writer's own practice and method of procedure are. This lack of individuality in medical literature I often deplore, and it is for this reason that I have become very conservative in buying books unless a review of the same by a trustworthy and competent authority assures me that they reflect the writer's personality, individuality and experience.

Others of my comments will be more of a personal nature. But I want it understood that I have no complaints to make, no ax to ground, but only comments to make on things medical.

My success—if you can call a man successful who, at the age of fity-nine and after thirty-five years of practice works and has to work twice as hard as he did at the age of forty—my success, I say, I ascribe to these causes:

First—The possession of a first class general and medical education.

Second—A great capacity for, and willingness to work.

Third—A habit of being on the job twenty-four hours of the day.

Fourth—A determination to keep up with the times at any cost.

Fifth—Honesty and sincerity of purpose and a desire to treat patients and physicians according to that code of ethics which is common amongst all gentlemen, and requires no special wording or translation to make it suitable for medical men only.

There is no code of ethics for medical men only. After all, the code of ethics can not give specific instances, but only general rules; and when, for instance, a brother physician responds to an emergency call on one of the cases under my care, and then unceremoniously takes charge of that case, it is for him and for me to determine whether or not the code of ethics has been violated in this particular instance.

Patients have a right to change physicians. But this should be done in a gentlemanly (ethical) manner. But if it is done by insinuations, be they ever so subtle, and by undermining the other physician's reputation so that he finds it difficult to even collect his fee, then it is reprehensible in the highest degree.

But to jump into the medias res. It is two o'clock in the morning. I had just returned from an obstetrical case to which I had been called three hours before. It was a multipara. When I arrived I found the patient up and around and smiling as if nothing were going to happen in the near future. Her pains were very irregular and weak, coming on every five to ten minutes, and being characteristic of the first stage of labor. After boiling my gloves I made a vaginal examination and found the head in the middle strait, and the os the size of a dollar and easily dilatable. Having satisfied myself that there were no contra-indications I proceeded to give hypodermically 7 mms. of pituitrin. Two minutes afterwards the pains became so violent and frequent that I had a hard time to get the patient back to bed, and within fifteen minutes the baby was born. There was no asphyxiation, no post-partum hemorrhage, and the whole procedure was a welcome revelation to both patient and doctor.

I have also used pituitrin many times in primiparas. I seldom use it unless there is a lack of force in the expulsive pains, and when I do use it I make it a point to wait until the os is fully dilated, and the second stage of labor is well under way. It seldom fails, then to exhibit its marvelous expulsive power. But it is in multiparas where you see its real value. Those are the cases which you hesitate to leave for fear labor will begin and be finished before you have time to return. (I speak from experience). And it is in these cases you have it today in your power to bring about a termination of labor and the birth of a living baby in the shortest possible time. Since prescribing pitpuitrin in multiparas I seldom spend more than one or two hours with them, and I have never seen any bad effects either on the baby or the mother that would make me afraid to use it the next time.

For our friend, the obstetrical specialist, to suggest that pituitrin is a dangerous remedy in the hands of the general practitioner is perfectly ridiculous and gratuitous. It is true, every drug exhibits at rare times and in certain cases of idiosyncrasy, vicious and dangerous tendencies, but the indications for the use of pituitrin are so clear, so plain and so simple and so easily understood that a tyro can be trusted

to act on them. Certainly its use is not nearly so dangerous and so vicious as the use of the prophylactic forceps or version. I do not care how clever certain operators are themselves, and how safe in *their* hands those so-called prophylactic operations are, their teaching violates the fundamental principles of good obstetrics, which forbids operative interference unless either the mother or child is in danger,—a teaching the soundness of which has never been challenged since my illustrious teacher, Professor Winkel, first emphasized it and insisted on it in the strongest terms.

But speaking of obstetrics of today, I dare say that since the advent of the "big four"—the telephone, the rubber glove, the automobile and pituitrin, the practice of obstetrics has *almost* (?) become a pleasure.

I had just become fairly comfortable in bed when, at four o'clock, the telephone rang, and the voice of an old patient of mine asked me to come and see his two boys who were, he feared, very ill from acute stomach trouble.

With the aid of a taxi I got there within the half hour, and found two of his sons very sick, with vomiting and fever. Upon inquiring I got the following history. The two sick boys, aged seven and eleven (he had another boy aged nine), had gone the day previous to a grocery store and bought some cheap colored candy. The boy aged nine had not gone along, nor had he eaten any of the candy. A few hours after eating the candy the two boys took sick with vomiting. The family physician who was called naturally thought the case to be one of acute indigestion, especially after hearing the story of the candy, but in the night the boys took very much worse, and on my arrival I had no difficulty in recognizing the trouble as epidemic cerebrospinal meningitis. These were the first cases reported here in Kansas City during that epidemic. A spinal puncture brought an almost milky looking spinal fluid, and both culture and microscopic examination showed the meningococcus.

The oldest boy ran a very severe course, with a very extensive herpes labialis and facialis and extreme opisthotonos, which persisted for weeks.

The younger boy ran a somewhat milder course, but with a metastasis in one of the knee joints which was treated and cured with injections into the joint of meningitis serum. Both boys recovered after a long sickness, as did also the mother of the boys, who took sick some time afterward. But one of the nurses in attendance contracted the disease, was removed to the General Hospital, where she died in spite of every effort on the part of the hospital physicians to save her.

These cases were seen with me by Dr. VanQuast and Dr. Frank Hall. During that epidemic I treated or assisted in the treatment of fifteen cases, one of them the sister and another the son of a physician, all of which recovered except one, a per centage of over 93 per cent recovery—a remarkable showing, indeed, you must admit, especially when you remember that the mortality in cerebrospinal meningitis before the introduction of Flexner's serum was 75 per cent. The patient who died was a woman sixty years of age, whom I saw in consultation with two other physicians. She was extremely ill and delirious and had been under treatment by those two physicians for almost a week before I saw her, for supposed uremic poisoning. She died five minutes after the first intraspinal injection of serum. Whether her death was due to a faulty technique, as is suggested by Dr. A. Sophian's writings, or to the natural result of the disease, I cannot say. I will here remark, however, that the technique of intra-spinal injection is by no means always easy. Personally I have learned to regard the so-called "dry" punctures with suspicion, for many of them prove, after repeated efforts, a myth, and often, after many trials and long delay, does the spinal fluid flow from the needle.

Speaking of spinal punctures, I want to mention that it was Dr. Jerowitz and myself who, thirty-one years ago, were the first in Kansas City to make use of it in a case of internal hydrocephalus, not for diagnostic, but for therapeutic purposes.

I also want to state that one of my cases, a child of a year and a half old, recovered with almost total loss of hearing. The many words which the child could speak before his illness he afterwards forgot, and he is now a confirmed deaf-mute.

It was quite late in the morning when I returned home. After taking breakfast I started out on my morning route.

The first cast I went to see was a case of peritonsilar abscess. I had a little nitrous oxide gas administered to this patient and opened the abscess with a knife, following it up with the introduction of my finger into the abscess cavity to break down all adhesions and make one cavity out of it. The whole operation lasted but half a minute or less. This method of operating on peritonsilar abscesses is, I think, original with

me. It can, of course, be done only under an anesthetic, but since doing this little operation in that way I have never failed to strike the abscess either with the knife or with the finger, and I have never seen a recurrence of it, though you will agree with me that peritonsilar abscess has always been considered a recurring disease. Of course, a tonsilectomy will afterwards permanently do away with this trouble.

The next case was one of tuberculosis of the lungs with profuse hemoptysis. I prescribed a standard preparation of digitalis for this patient, and had the satisfaction of seeing the hemorrhage stop in less time than I had ever seen it stop before. I have been using this treatment many times since, also on cases of habitual nose bleeding of the young, and always with the same almost brilliant results. Hemorrhage of the lungs, even if it is profuse, is often due to a congestion of a portion of the lung, resulting in profuse capillary oozing, and it is in these cases that digitalis performs its wonders.

The next visit was to see an old lady 60 years of age who was suffering acutely from some serious stomach trouble. Everything she ate she vomited; and her pains were so severe that one could hear her moan and groan in the next room. Besides, she had one significant symptom: "danse de ventre" which she performed especially in the presence of sympathizing visitors. She had emaciated to a mere skeleton and was quite unable to leave the bed. The vomiting was at times bloody. In taking her history I learned that exactly 10 years before I saw her and while she was living in Newton, Kansas, she was sick in the identical way. She had all the physicians in town then but none could help her. And they finally called Dr. J. Block of this city in consultation, who made a deliberate examination and pronounecd the case one of gastric cancer. After Dr. Block had left, the husband called in, somewhat reluctantly, a wonder doctor who lived in the neighborhood and who enjoyed quite a reputation for performing miraculous cures. He made a little hocus-pocus over the patient's head and left. In the night the old lady's pain got almost beyond endurance and her husband set out to call the healer back only to find him waiting at the foot of the stairs. He accompanied the husband to the patient's bedside and made a little more hocus-pocus and predicted that something would happen that night, whereupon he left. An hour or two afterwards an explosion took place in the patient's belly, and immediately she felt relieved. The pains left her; her appetite returned; the vomiting stopped and in less than two weeks she was walking along the streets of Newton. (This story I verified from different cources.) I realized I was dealing with an aggravated case of hysteria. Nothing I did nor anything which several other physicians advised did the least good; but a certain magnetic healer who held forth at 12th and Washington started her on the road to recovery and she lived for ten years after.

This, like many other cases, shows that the physicians are too little trained in the different methods of psychic healing which are indispensible in the treatment of hysteria as well as helpful in most all other diseases which he is called upon to treat.

The next cases of interest that I saw were three cases of typhoid fever in children. Two of them, one nine and one thirteen years old, had repeated and profuse intestinal hemorrhages. The other, a highly neurotic child, had had an extreme temperature and had been unconscious for two weeks steady without any other complications. All three children got well. Children generally recover from typhoid fever, and since the introduction of typhoid bacterins and the new method of feeding, even adults run a more benign course.

At least I feel that the use of bacterins has given good results in my hands, and I would advise its use as a routine measure, not only for prophylaxis but also for treatment. In a disease like typhoid fever, for which we have no other specific form of treatment, anything that holds out any hope is justified, even though it is hard to comprehend its *modus operandi;* and whenever existing theories conflict with practical experience we must either drop our theories or make them conform with our experience.

Typhoid fever in this city has become almost as rare, thanks to improved water and milk supply, prophylactic immunization and other hygienic measures, such as control of the fly menace, as used to be smallpox in the great medical center, Munich, where I studied for almost three years. I well remember that only once during those three years did Professor Ziemsen announce to us students that he might have an opportunity to show us a case of smallpox, and *it* proved to be something else, and I never did see any smallpox until I came to this country.

This difference in the prevalence of this disease in Germany and the United States

is entirely due to the fact that in Germany vaccination of every child before it reaches its second year is absolutely compulsory. Anti-vaccinationists, like anti-vivisectionists, are a misguided, misinformed, fanatic lot, and a menace to the community in which they live. Vaccination will absolutely stamp out smallpox, to the everlasting glory of Jenner, who discovered it, and vivisection is responsible for most of the wonderful medical and surgical progress which we have witnessed in the last fifty years.

And so it is with typhoid fever. Twenty years ago, when my practice was just one-third of what it is now, I never passed a season without seeing half a dozen or more cases amongst children or adults. Today, two or three years pass without seeing a single one.

Time had now arrived for me to rush to Rosedale to fill my lecture hour from eleven to twelve at the University of Kansas Medical School, where I talk to the students once a week on dietetics and diseases of the stomach and intestines. It would take me too long to sing the praises of diet as a remedy. I will only say that those who have never taken the time to inform themselves on the scientific use of foods and feeding are missing a most interesting and useful weapon against disease, one without which some diseases cannot be cured at all.

These lectures to the students of the University of Kansas Medical School I never miss if I can possibly help it. The weekly contact with young, wide-awake medical students is a constant inspiration and incentive to me to do my best and keep abreast with the times. In teaching them I feel that I benefit myself the most.

The lecture over, I hurried to see a case of diphtheria in a child. It was the second dose of five thousand units of anti-toxin that I was about to inject. The discovery of the anti-toxin treatment for diphtheria has certainly robbed this disease of childhood of its former terrors. Since its introduction in the year 1894 I have only lost one case from heart failure, though I have treated many, and some in which operative interference in the form of either intubation or tracheotomy had become necessary.

I still stick to my earliest teaching in these cases, and inject the largest possible dose every twelve hours, or even oftener if necessary, until the patient is either well or dead.

The use of diphtheria anti-toxin as a prophylactic I always leave to the choice of the people, after explaining to them the advantage and disadvantage of this measure. I hope that the introduction of Behring's new combined toxin and anti-toxin method of prophylaxis will render a more active and lasting immunity possible, and make its use general.

As to the diagnosis of diphtheria I always control the clinical diagnosis with the culture and the microscope; but in making the culture I take the material from the throat, not with a cotton swab, but with a sharp spoon. This method is not only not painful, but is more accurate and direct and there is little chance of either contamination of your culture or of missing the diphtheria bacilli altogether, as I have seen done repeatedly.

This method of taking material from the throat with a sharp spoon is also original with me, but though I have talked and written about it time and again, and tho I am convinced that it is far superior in accuracy and results to the cotton swab commonly used, I have never been able to make the medical profession pay any attention to it. In the west where I live nothing takes unless it comes from the east, and in the east the voice from the west is little heard unless spoken through a megaphone, which I never use.

Like typhoid fever and smallpox, so does diphtheria, thanks to Behring's and Roux's immortal discovery of the anti-toxin, promise to become extinct. A certain type of diphtheria, the type which requires tracheotomy or intubation, has already almost disappeared. Many years ago when I was still a struggling physician I remember one winter season in which I had six cases on which I had to perform a tracheotomy to save the lives of the patients. All six recovered, some of them under the most unfavorable and even spectacular circumstances.

One case, that of a four-year-old girl, D, was especially remarkable and dramatic. I had seen this case in consultation with my friend, Dr. Owen Krueger, in the forenoon of December twenty-fourth. The child was quite dyspnoeic then, and it was apparent to me that an operation would become necessary before the day was over. I told Dr. Krueger that I would be ready to respond to his call at any time. It was five o'clock that evening when the telephone rang and Dr. Krueger asked me to hurry down to Fifth and Broadway, as he thought the child was dying. I had promised my friend, Dr. B. L. Sulzacher, then a young physician, to let him see the first case of trache-

otomy I would get. So together we hurried down to the patient's bedside. Pushing my way through a roomful of Irish sympathizers I found the child in the rear room, apparently dead. The face was pale, cold and covered with drops of perspiration. The heart beats could not be heard, nor any respiratory movements seen in the chest. Quickly I opened my satchel and pulled out my knife, and overcoming with a few words the objection of the father, who said to me "What's the use to operate. The child is dead." I had my assistants pull the child's head over the edge of the bed, opened the trachea by a high incision, with practically no light (it was just getting dark) and with nothing but my fingers to guide me. As the knife entered the trachea a stream of pus welled out of the wound. Quickly I inserted a male silver catheter, sucked the trachea free of pus with my own mouth, introduced a silver canula and asked my assistants to institute artificial respiration. During all this time there was apparently no sign of life, but after using artificial respiration for five or ten minutes (the judgement of time in such emergencies becomes lost) I noticed the child gasp. The gasps grew more frequent until finally, to make a long story short, both respiration and circulation were re-established. The child fully recovered after a most stormy sickness.

The other case was that of a two-year-old child, living near First and Holmes Streets. I had just returned to my office one Sunday night at twelve o'clock when the telephone rang and a voice asked me to hurry down and save the child. Dr. Hall and Dr. Talbot, living in the same building with me at that time, were kind enough to accompany me. On arriving at the bedside I found the child fighting for breath. It was a case of laryngeal diphtheria. I quickly got my instruments ready and with the assistance of my friends, while the grandfather of the child held a kerosene lamp to illuminate the field of operation with an unsteady hand (it was before the Volstead Act) I opened the trachea, introduced the canula and took care of the child all night until a nurse could be found the following morning. That child, too, recovered.

The third patient was the son of the janitor of the Switzer School at Sixteenth and Madison. The boy was about six years old. My friend, Dr. J. Block, assisted me in that case. The throat of the child was plastered with diphtheric membrane. I first attempted to introduce an intubation tube, but, although I succeeded in getting the tube through the larnyx the child quit breathing, became cyanotic and in a few seconds moribund. I quickly removed the tube, performed a tracheotomy instead, and saved the child.

The other three cases did not present any remarkable features. All six occurred in the same winter. The first and third would undoubtedly have died with intubation. The choice between intubation and tracheotomy is not always easy. Both have their indications and contra-indications. Personally I have always felt safer with tracheotomy, and a high tracheotomy in these emergency cases, is in my judgment, the correct operation, especially so because, with the use of anti-toxin the spread of the membrane beyond and below the incision can easily be prevented, and because the high operation presents no great technical difficulty, and is possible in the quickest time and under the most unfavorable circumstances. To wean the child of the tracheotomy tube often presents difficulties which I finally learned to overcome by closing the opening of the tube with a series of corks, through which, by ever smaller openings, the child learns to breathe through the normal channel.

It was now time to go to the office. As usual, it was too late to take lunch first, and so I did as I generally do, made a virtue of a necessity, and did without lunch. I find that this abstinence at mid-day has many advantages. It keeps the mind clear and alert, the body active and the blood pressure low. Doing without lunch comes nearer to living according to the new standard of diet as laid down by Chittenden of Yale, which calls for 2,000 calories per day, and for a maximum of between 40 to 60 grs. of protein, as against 100 according to the old standard of Voit and Pettenkofer. I want to add, however, that I do not advocate the use of this new standard for children or young adults, but I am quite sure that all those over forty years of age will greatly benefit by its adoption.

So, without lunch, I went to my office. I first openel my mail, amongst it a new edition of the Jackson County Medical Society's "Bulletin." I always derive pleasure from reading it, and I certainly hail its advent, its spirit and its management as a distinct asset to the Society. When I was glancing over the program of the coming meeting of the Society, reading that Dr. X was to open the discussion of this, and Dr. Y the discussion of that paper, a somewhat melancholy smile stole over my face; though I was the first one in this city to

practice and teach Bacteriology, the first one to practice and teach Hematology, the first one to make the Widal test, the first one to establish a clinical laboratory in this city, the first one to teach dietetics and diseases of the stomach and intestines, the first one to use the stomach tube in gastric diseases for diagnostic purposes, and though I have always been connected with teaching institutions, first with the University Medical College of this city and later with the University of Kansas as Professor of Medicine, I have never, in the last thirty years, been invited to open the discussion of any paper read before this or any other medical society. If professional jealousy and medical politics are used to exclude even our teachers of medicine and members of the faculties of medical schools from being heard it is time, I think, to at least call attention to this deplorable state of affairs.

The next thing on my desk to attract my attention was a basal metabolism report. The report was plus 15. The patient was a woman of fifty weighing 180 pounds, 5 feet 4 inches tall, with a pulse of 70. I need hardly comment. There is nothing wrong with the test itself. Given a modern, dependable metabolism machine, an operator with the necessary training in making these tests and a patient intelligent and composed enough to co-operate, that report should have read minus, instead of plus. But how frequently do we see these necessary conditions fulfilled? Under such circumstances it is up to the clinician to draw his own conclusions, which, in most cases, being based on the history of the case, the weight of the patient, the pulse rate and other signs and symptoms, are far less apt to mislead him into the wrong diagnosis than a report based on a commercial machine, a half-trained operator and a nervous patient.

The same is true of the Wassermann test. Correctly done, it is invaluable, but when the same sample of blood is examined by two laboratories, the one reporting a positive plus 4, and the other a negative, what conclusion can the poor physician draw from, and what dependence can he place in such a report?

These criticisms are not theoretical or imaginary, but based on actual and repeated experience. Having vividly in mind Dr. Cabot's "Mistakes in Diagnosis"—a remarkable confession, indeed, and remembering other hospital reports regarding the agreement between anti-mortem and post-mortem diagnosis, it looks to me as though, in spite of the many wonderful scientific and brilliant laboratory aids, including the x-ray which we now use in studying a case and in making a diagnosis, our diagnostic skill has not improved in proportion to the number of new discoveries. It is quite plain to me that what we have gained on the one side we have lost on the side of history taking, accurate clinical observation, the use of our five senses, which so ably guided our old masters of medicine toward a correct diagnosis.

But I must hurry on and fill my engagement with a patient whose stomach contents I want to examine. The patient gives a history of gastric distress for the past three years. There was even a decided history of hunger pain. The x-ray, too, spoke in favor of duodenal ulcer. Yet, on exploratory laparotomy no ulcer was found, but a large, single stone removed from the gall bladder. The examination of the stomach contents in this case showed nothing but a hyperacidity, no blood or motor disturbance. This case demonstrates the difficulty of making a gastric diagnosis in the absence of classical signs, and also proves that the contention of Professor Kerr is correct when he claims that hunger pain is not necessarily pathognomonic of duodenal ulcer as Moynehan would have us believe, but also occurs in other affections, notably gall-bladder diseases. It also shows that there is no region like the upper abdomen in which so many surprises are in store for the operating physician.

The next patient to come into the office was a child suffering from pertussis. The little fellow was a year and a half old—too young to have whooping cough with safety. I was using a bacterin in this case, like in all cases where the people are willing to have it used. While I am not prepared to assert that this bacterin is a cure, I do say that it is of decided benefit, and a welcome addition to the management of this dangerous disease. All the patients thus treated recovered without complications, whereas, several of those who did not have the bacterin contracted penumonia. The number, however, is too small to allow any deductions to be drawn. Besides, I never depend on the bacterin alone, especially not in serious cases, but upon other legitimate and tried measures, in addition, such as belladonna in increasing doses, daily hot baths and so on. It is especially the latter on which I greatly rely in attempting to prevent pneumonic complications in whooping cough.

The next case presenting himself for

treatment was a young man who had been suffering from a bad cough for the past two weeks. No amount of cough medicine seemed to relieve it. The cough was insistent, dry and unproductive. On examination of the lungs I found normal conditions everywhere except over the left posterior lower lung. There you could hear an abundance of crepitant rales, extending from the spinal column to the middle axilary line, and from the twelfth rib up to the eighth. There was practically no dullness or bronchial respiration. The temperature was normal, and yet the whole thing looked like a pneumonic process. I have seen scores of cases just like this one during the past few winters, and having found by experience that their recovery in this climate takes from four to six or more weeks I have gotten into the habit of sending many of them to San Antonio or other southern resorts where they get completely well inside of a week or ten days. I am sorry I have not yet thoroughly studied the bacteriology of this type of pneumonia, but it is a characteristic picture which I have described elsewhere in detail, and to which, for want of a better name, my friends have given the name of Wolf's disease.

A less seasonable disease presented itself in the next case. It was a baby a year old suffering from enterocolitis or "summer complaint," in the winter. I mention this case not for any unusual symptoms it presented, but just to record the fact that I am in the habit of treating all of these cases with Bulgarian baccili tablets, and with great success. Aside from a restriction in diet for the first three or four days the usual milk diet of the baby was continued and recovery took place in a very short time. I have come to look with a great deal of favor upon this form of treatment.

Speaking of summer complaint in infants, I want to say that this disease also promises to become extinct. Thanks to improved milk supply and other dietetic rules and regulations, enterocolitis is becoming rarer every year. Personally I do not advocate either the use of raw certified or pasteurized milk in the summer, but I insist on every drop of milk going into the baby's stomach being boiled. As to modifying the milk, to make it more suitable for the baby's age, I still stick largely to Dr. Jacoby's formula, for I think the simpler and less expensive the modification is the better it is understood and the more willingly it is applied by the mothers and nurses. For the same reason I generally dispense with the addition of dextrimaltose, using instead ordinary granulated sugar, and with almost uniformly good results.

Anyone, who, like myself, has had the opportunity to watch the change of fashion in artificial feeding, and has observed how it was first the proteid and then the fats and then the serum of the milk which got the blame for the failure of the food to agree with the baby, will not have too much confidence in the stability of this latest scapegoat of milk intolerance, the sugar of milk. I have enough confidence in the wisdom of the Creator to believe that if malt sugar were the proper sugar for milk it would be contained in it in place of milk sugar. At any rate I believe that the last word in the feeding of well and sick infants has not been spoken.

The next case I saw was a patient with brachial neuritis. Neuritis is a very distressing affection. While its diagnosis presents, usually, no great difficulty, yet the name is often much abused, and many things are called neuritis which have nothing in common with it, and as a result many brilliant and rapid cures are published which, in more honest hands, are complete failures.

Typical neuritis is a long drawn out disease, and rest and immobilization is its best treatment in the acute stage. Heat, massage, active and passive motion have their indications in the later stages. How much focal infection of the teeth, tonsils or what not has to do with the etiology of neuritis is hard to say. I yield to no man in my belief in focal infection as the cause of many diseases. Like many new innovations, focal infection contains a large kernel of truth, but is by no means the whole truth.

When we see cases of neuritis get perfectly well after three to six months under appropriate treatment without any attention to teeth or tonsils, and remain well for twenty or thirty years; when we remember that poly-neuritis might be caused by deficiency of vitamines in the diet, and when we further read that all the gastric and intestinal diseases, such as ulcer, inflammation, atrophy of the bowels and even infection of the teeth themselves can be experimentally produced by diets deficient in fat soluble vitamine "A"; when we see cases of chorea of pregnancy recover under proper treatment even though no attention was paid to focal infection; when we further reflect that even certain drugs can give rise to neuritis—then we might well pause and ask ourselves the question if focal infection

alone can explain the etiology of all these cases, and if not other causes are often at play.

Focal infection as a cause of disease is undoubtedly one of the great contributions to medical science and practice in this century, and Rosenow, who put it on a sure experimental basis deserves all the credit and glory which is accorded to him. Yet when we see chorea in children and rheumatism recur and recur in spite of tonsilectomy and adenoidectomy we come to realize the necessity of further study and investigation of this subject.

It was now nearly six o'clock and I began to get things ready for a salvarsan injection. My personal opinion about salvarsan is that it is a cure for syphilis in its primary stage. In the secondary and tertiary forms of syphillis absolute cures with salvarsan are almost rare as they are with mercury, though it is generally superior to the latter remedy in the rapidity with which it removes the outward manifestations of the disease. I am now using neosalvarsan almost exclusively, and believe that in correspondingly appropriate doses it produces the same results as the old salvarsan, while, at the same time, it is easier to manipulate. I am now making intravenous injections with concentrated solution, dissolving the salvarsan in from two to ten cc of water. With this method the so-called Wasserfehler is practically eliminated and the necessity for special apparatus done away with. An ordinary all-glass Luer syringe will do, and it takes no longer to make an intravenous salvarsan injection than to give a hypodermic injection of morphine.

Speaking of salvarsan, I am reminded of a case of beginning optic atrophy of syphilitic origin. The young man, a patient of mine, consulted a well known opthalmologist of this city, who advised him to undergo a thorough course of salvarsan treatment, and recommended that he see an equally well known surgeon to give him the treatments. On being asked by the patient if he could not just as well have Dr. Wolf, his usual medical advisor make these injections ,the opthalmologist indignantly shook his head and said no, no, no! only a surgeon could make these injections correctly. That patient's arm, by the way, shows three scars, where the surgeon made three incisions to lay bare the vein. If I could not enter the vein without making an incision, or if any internist could not do that, be it for the purpose of making a salvarsan injection or a strophanthin injection, I would give up my job.

The same ridiculous contempt for the general practitioner came to light in another case of mine. It was a case of general pruritis, which I referred to a well-known dermatologist of this city for treatment. He knew well that it was my case; that it was I who sent it to him. Yet, when a thorough medical examination became necessary in his judgment, he sent this patient of mine to another internist to do the work. The scheme, however, failed. Both of these cases came back to me. The one with the optic neuritis had gone totally blind, and the other, with pruritus, developed a general pustular exzema, with high fever and general toxemia under the expert treatment of the dermatologist. That I did some tall knocking in these instances I do not deny. Talk about fee splitting! This sort of conduct is worse, I am sure. It seems there are some men in our profession who cannot believe that any physician can do good and thorough work unless he is tagged with the sign "Specialist." To all these men I throw down the gauntlet and am at any time willing to compare my work with theirs. I certainly do think it is the thirty-second degree of nerve to send cases referred to you to a third man, and I do not hesitate to express myself accordingly, and if a man cannot get recognition unless he asserts himself, then, by all means, let him do so.

But to come back once more to the case of optic neuritis, which ended in total blindness. I want to say that it is my impression and belief that it was the use of salvarsan that hastened this unfortunate outcome in this case. I would warn the medical profession against the use of strong arsenical preparations in case of beginning optic neuritis.

The next and last case seen in my office was that of a young married man who consulted me about a pain in the left side of the upper abdomen. He thought he had stomach trouble, but the pain was a little too far over towards the left to make me think the stomach was at fault. I examined a sample of his urine and found a few red blood corpuscles, and made the diagnosis of kidney stone. I always place great confidence in the finding of microscopic blood in the urine. I think it helps frequently to arrive at a diagnosis when all other means fail. It seemed, just to accomodate me, it was not many days afterward that this patient began to have characteristic and severe attacks of renal colic, and these

attacks grew so frequent and intense that he decided upon an operation, but just a few days before the day set for the operation he passed a stone, thus proving the diagnosis correct.

Leaving the office at six thirty, and after seeing a few more cases of interest that day, I finally got to bed at ten o'clock, after twenty-three consecutive hours of work.

Naturally, the question arises, is it ever possible for one man to master all these subjects to his own and his patient's satisfaction?

In anwer I would say that *it is possible* for one man to cover all of these subjects, especially those of a non-surgical nature. Our great masters and teachers of medicine would resent being called specialists of any one organ. An Erb might be known for his work on diseases of the nervous system; a Van Noorden may have become famous for his researches in diseases of metabolism; an Osler or Billings or Jacoby may be chiefly known for their scientific work or preeminence, in some other special department of medicine; yet any one of these masters of medicine would resent and ridicule the suggestion that he was not just as capable to pass judgment on diseases of any other organ or system as the one his name happened to be connected with in scientific medicine.

But whether it is *wise* for one man to cover all of these subjects—that is another question. Success in general medicine is gained at a terrific cost of energy. Feeling this cost keenly, I would not advise any of my younger friends to become a general practitioner under the conditions as they exist at the present day. From a scientific, social and economic or any other point of view, all arguments are in favor of the specialist in medicine.

And yet, the general practice of medicine has its compensations. To me it has always been extremely interesting and absorbing, and it has given me not only an insight in to the psychology of other people, but it has also helped me to form a philosophy of life and living which dissipates all fear of the future and makes for eternal happiness. Besides, the general practice of medicine brings one into close contact with patients whose confidences and friendships cannot be treasured too dearly.

Nor do I find it particularly difficult to keep up with the times on all subjects. After all, the principle underying the diagnosis and treatment of disease are common to all diseases and vary only with the special function of the various organs. Once these common principles are mastered the variations demand no special or supernatural skill or gift, and should not prove difficult to a man with average intelligence and first class training.

But to master the whole subject of medicine you have to forever and ever keep reading and studying a great variety of subjects. Personally I am a voracious reader of medical literature, the reading of which has almost spoiled my taste for most other literature. I am a subscriber to the Journal of the A.M.A., to the Journal of the American Medical Science, to Archives of Diagnosis and to Munchner Medicine. Wochenscrift, to the Therapeutie der Gegenwart. I read occasional articles in English and French Journals if I am especially interested in them, so that there is very little of importance that escapes me, be it medical or surgical, general or special. Besides, I have always done my own laboratory work, tissue examinations and Wassermann test excepted, because they require, not more skill, but more time and space that I have at my disposal. And I make all the other laboratory investigations with the utmost facility and pleasure. The truth is, I would not want to be a physician if I could not do that, and you would be surprised to know how little time and space is required for the making of the average routine tests.

But the necessity and wisdom to specialize in one medical subject arises not only from a scientific, but also from a social and economic point of view. There is no doubt that the busy general practitioner finds social intercourse a hardship rather than a pleasure, and the uncertainty of keeping social engagements renders them an impossibility. Nor does the general practitioner spend enough time at home to exert that influence and cultivate that intercourse with his family so important to the future welfare of his children.

The economic side of the question, too, deserves consideration, especially as it is closely interwoven with the social side. It is common knowledge that the pecuniary compensation of a specialist is many times greater than that of a general practitioner. The advantage of this to the specialist cannot be over-estimated. For some reason or other the public knows that it has to pay him a large fee. On the other hand, it is unwilling to adequately compensate the general practitioner, even though he gives the same or superior service. They will ask him to be ready for a call day and night, they expect him to spend hours, and

even days, at the bed-side of their dear ones, they are willing to pay one hundred and fifty to five hundred dollars for an operation which requires an hour's time, and no particular skill, but object to a similar fee for an obstetrical case, necessitating a forceps delivery and requiring twenty-four consecutive hours of the physician's attendance.

But such are the changes which have come over the practice of medicine in the last twenty-five years. These changes, like the specialists, have come to stay. Some of us older men, caught between the old and the new order of things, like between two millstones, might deeply deplore these changes, and suffer mentally and financially from their consequences, but we might just as well resign ourselves, remembering the old and ever true saying—"*tempora mutantur at nos mutantur in illis*"—Times change—and unless we change with them and adjust our lives and our work accordingly old age will spell a tragedy rather than the blessing it ought to be.

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Vitamins—Calories, Etc.

RENIG ADE

(John A. Dillion M.D., Larned Kansas)

The Doctor slumped down in the office chair. It had been a hard night; thanks to an undersized primipara and the anxiety of a nervous mother.

Being far away from modern maternity facilities, he was compelled to sit idly about for many hours trusting to nature; instead of ending the problem with a brilliantly executed cesarean section. However, after a judicious wait and a bit of juggling with the forceps everything came out lovely in the end.

But it was tiresome and nerve racking, and the Doctor was to be excused for sharply kicking the dog which sniffed at him as he walked past the milk-house. And, too, the dog should be pardoned for taking a nip of perfectly good skin from the Doctor's left leg. After glaring defiantly at each other for a moment the dog slunk under the porch, and the Doctor climbed in his flivver.

Arriving at his office and iodining his battle scarred leg he slumped down in the chair as before mentioned. Picking up the paper his eyes idly ran over the advertising section.

At the top was a cut depicting a stalwart, long-eared beast called a "Jack". A brazen recital of this animal's qualifications followed. The Doctor was no prude, but he blushed slightly as he read the eugenic biography of this creature, and thought how much he excelled the human male of the species.

Directly under this graphic display was the timid testimonial of Grandpa Banks, who wished to acknowledge the wonderful results he had gotten from Deans Kidney Pills. Grandpa was at the age where about the only thrills he experienced were hopefully watching the rejuvenating effects of patent medicines and voting the Democratic ticket. He could remember vividly when he marched with Sherman, and the year he spent in Andersonville prison was as yesterday; but he could not remember where he left his shoes or his pipe, and never recognized his next door neighbor when he met him up town. So Grandpa's testimontial ran tranquilly along from year to year and the Doctor catheterized him at regular intervals.

Next was the lady who used Lydia E. Buckram's Vegetable Compound and gratefully placed herself on record as having escaped the periodic agonies that once made life a burden. She also laid claim to having maintained a youthful face and figure in spite of her age. In corroboration of this a life sized cut of a robust female with bangs and bustle was shown. This might indicate that the ad had been run for some time.

These examples of the patent medicine vendors art the Doctor noted and read on. The next ad attracted his attention for several reasons. In the first place it was that of a familiar product. Who among us has not surreptitiously purchased a cake of this and dropped it down into a malt, sugar, dandelion, cherry, grape or some other solution and then sat back and patiently watched it "carry on."

I refer to your old friend, Fishbein's Yeast. In olden times yeast was used to make bread dough raise or rise. Our mothers made it and spread it on a board to dry before it was put in the bread. The younger generation has entirely lost sight of this bit of history, and yeast to them means something for an entirely different purpose.

It no doubt has therapeutic value. Health faddists and pseudo scientific individuals have been lending their names, with degrees significantly attached, lauding the value of Fishbeins Yeast for all the ills that flesh is heir to. Athletes with bulging muscles enthusiastically give to yeast the glory.

Now when it comes to athletics and espe-

cially basket ball, we would not be in a position to question the value of yeast, shredded corn cobs, creamed inner tubes or any other article of diet advocated by the coach. For results count. If a man can shoot ten baskets on a diet of muskrat eggs and only eight on scalloped cocoanuts, we say "vive la muskrat." So a testimonial like the following would not surprise us.

"Gentlemen: Before taking your yeast we were hopelessly defeated, the score being 97 to 3, at the end of the first quarter. One small cake was divided among our five players at this time. The effect was marvelous. Players who before seemed logy and apathetic came back with a snap and enthusiasm that carried everything before us. Our opponents had no chance of scoring afterwards and we won the game against the strong U of California, 277 to 97. Thanks to your yeast."

We smile tolerantly at Grandpa Banks, grin delightedly at Lydia E. Buckram's champion with the bustle and bangs, but what are we to do with Frog Andrews Fishbein's Yeast endorsement. It lacks scientific value for the reason he has not played square with us as did Grandpa Banks, in as much as not a word was said as to how many cakes were eaten. Neither did he state what organs were missing out when he started the treatment.

Situated as he is within the shadow of a great school with learned men around, there should have been no trouble in getting an accurate check-up on the case. So unless we can get more accurate data, dosage, and deduction, we cannot refer to Frog's testimonials, nor give credit where possibly it is due.

The medical profession should rise in a body and insist that the faculty of our schools have no right to foist their scientific articles upon them without carefully checking up the bibliography, case histories, etc.

It would not be a prohibitive expense to have at least six lantern slides made showing that many different bake shops where the yeast could be purchased. A guinea pig rampant on a big cake of yeast would be effective, at least for us western fellows.

I fear a good many are losing sight of the value of the lantern slide and the guinea pig.

For a man to come out boldly and empirically state he was troubled with milk leg brought on by herding cows when a child; and that two cakes of Fishbein's Yeast brought him out is interesting, but lacks scientific value unless slides and guinea pigs verify it. In fact, we would consider it effrontery for anyone to make such a statement.

All this the Doctor decided as he read Grandpa Banks, Lydia E. Buckram's and Frog Andrews' testimonials. Incidentally he decided to send his son, who had shown a marked yeast anaphylaxis, to a prune school in California which was strongly advertised in the Mother's Friend Magazine. He then slowly and painstakingly pecked out his daily correspondence.

Mr. James Sprague, Moss Ridge, Okla.

My dear Jim: I cannot send you the medicine you ask for as I have no record or remembrance of it. You say it was a dark liquid, and for one of the children. As I recall you left here with seven children, and, if memory serves me right you consulted me concerning them many times, individually and en masse. Incidentally, I find the last three are listed on my books as never having had the first installment paid on them. I cannot hope to hold your business so far away, so would suggest that you consult your home doctor.

Yours truly,

The Shrinkless Shirt Co., Buffalo, N. Y.

Dear Sir: The shirts you sent me subject to inspection, at the ridiculously low price of $7.50 for five, arrived and am returning them for several reasons.

In the first place I am a reciprocity bug. Next Tuesday I shall remove an annoying exuberance of hemorrhoids from our local shirt vendor which will keep me in shirts for five years at least.

Secondly, when I go forth to solicit funds for our hard driven preacher, your name will not be on my list.

Thirdly, should the tail of one of your shirts depart prematurely there would be an annoying delay of two weeks for repairs. We would have a lengthy correspondence and in the end I probably would never be quite satisfied with the new tail.

To sum it all up—unless you can support our local dominie, furnish bankable responsibility as to the durability of your shirt tails, or send me for removal a bunch of hemorrhoids of equal or greater size than your local competitor, I shall be compelled to trade at home.

Yours.

———B———

Dr. Richard L. Sutton was the guest of the Omaha-Douglass County Medical Society on the evening of March 8. In the afternoon, he lectured at the Technical High School.

KANSAS MEDICAL LABORATORY ASSOCIATION

Editor's Note:—The article below is the first of a series of articles to be published in this column on certain aspects of water analysis. C M.D.

The Organization and Operation of the Kansas State Water Laboratory

EARNEST BOYCE
Associate Professor Sanitary Engr. University of Kansas and Engineer State Board of Health

In discussing the work of the State Water Laboratory located at Lawrence, Kansas, it is perhaps desirable first to review briefly the waterworks situation in the state.

Kansas is regarded as an agricultural state yet approximately 45.5 per cent of the entire population of the state lives in cities having public water supplies. Of this number approximately 48 per cent are using treated surface water.

As research work began to indicate the direct relationship between the occurrence of certain diseases and the use of water from polluted sources, it became evident that something should be done to eliminate the possibility of a public water supply being the cause of disease. About twenty years ago, the Legislature realizing the governmental responsibility of preventing injury to health from this cause, granted the State Board of Health a certain amount of supervisory control over public water supplies under the provision of what is known as "the water and sewage law." This law requires that plans for water and sewer improvements be filed with the State Board of Health and that a permit be granted before construction. Further, this law provides that the State Board of Health shall have authority to investigate public water supplies, the law reading as follows: "Whenever the State Board of Health shall have reason to believe that the sanitary quality of any water supplied to the public within the state for domestic or drinking purposes is such as to be prejudicial to public health, it may upon its own motion investigate the character of such water supply. Whenever an investigation of any water supply shall be undertaken, under either of the foregoing provisions, it shall be the duty of the person, company, corporation, institution or municipality having in charge the water supply under investigation to furnish, on demand, to the State Board of Health, such information relative to the source or sources from which the said supply of water is derived and to the manner of storage, purification or treatment of the water before its delivery to the consumers as may be necessary or desirable for the determination of its sanitary quality. And the State Board of Health is hereby given authority to make an order requiring such changes in the source or sources of the said water supply, or in the manner of storage, purification or treatment of the said supply before delivery to consumers, or in both, as may in its judgment be necessary to safeguard the public health."

Some years after the passage of this act it became apparent that some laboratory control was necessary in the operation of public water supplies and particularly surface supplies. These analyses were needed by the Board of Health in order to determine the safety of water supplied to the public and in an equal measure they were needed by those in charge of water purification plants in order that they might know the bacterial and chemical quality of water they were furnishing to the public.

Obviously, many of these supplies were in small cities where laboratory facilities were not available and where the overhead of a special laboratory would be burdensome. Because of this economic factor and because of the uniform technique that a central laboratory would afford, it was deemed advisable to have a state laboratory, and in 1915, a statute making provision for its organization was passed by the legislature. This legislative authority was granted in the following short paragraphs:

"Regulations and fees. That the State Board of Health shall publish, in the official state paper, rules and regulations for the collection of samples and analysis of water, either natural or treated, furnished by municipalities, corporations, companies or individuals to the public, and shall fix the fees for any services rendered under said rules and regulations to cover the cost of the services, which fees shall be approved by the State Board of Administration before they become operative.

"Analysis in laboratory; disposition of fees. The analysis of all waters required in the rules and regulations shall be made at the Water and Sewage Laboratory of the State Board of Health in the University of Kansas, and the fees collected under the provisions of this act shall be turned into the state treasury for the benefit of said laboratory of the University of Kansas."

The placing of the laboratory at the University made it possible to start its work

with a minimum overhead expense and under the sponsorship of the departments of Chemistry and Bacteriology of the University. The provision for a schedule of fees made it possible for the University to undertake this work without its becoming a burden, the fees covering the cost of the extra work.

Before the State Board of Health proceeded under the authority just quoted, an interpretation was obtained from the Attorney General covering this statute. It was held that under this act bottled water and ice supplied for domestic consumption as well as private supplies used for drinking purposes for common carriers, were subject to the requirement of regular analysis and inspection.

With this authority, the State Board of Health formulated Rules and Regulations requiring routine inspection of water supplies by the Sanitary Engineering Division and the bacterial and chemical analysis of these supplies by the Water Laboratory and prescribing fees to make possible the maintenance of the laboratory.

These regulations have been in effect nearly ten years and there has been little need for revision. Since the engineer for the State Board of Health is by statute appointed from the civil engineering faculty of one of the state schools and since he has always been located at the University, it followed that his work was closely associated with the work of the laboratory.

Following the war, the position of director of the laboratory was combined with that of the engineer and a little later in a change of quarters at the University, the offices were united. In this way, duplication of work was eliminated and the work of the laboratory and the sanitary field survey were cosely correlated.

In operation, the regulations divide water supplies into surface and ground waters. Since surface waters are treated, it is obvious that a more frequent checking of the quality of the water is necessary than in the case of ground waters. Hence it is provided that samples of treated surface water be given a bacteriological analysis weekly and that there be a field test made of the purification works once a year. The latter requirement is met by having a portable laboratory suitable for making routine bacterial and chemical analyses of water. This field laboratory is used by the Sanitary Engineering Department and is taken to as many of the filtration plants each year as the limited funds and personnel permit.

One complete chemical analysis is made each year of surface supplies, as is also true of the ground water supplies. However, in the case of ground waters only two sets of bacteriological analyses are made each year. One set of samples is collected by the water department and the second set is collected six months later at the time of the annual inspection. Such additional bacteriological analyses are made as may be necessary in checking up of contamination appearing in ground water supplies.

The schedule of fees charged is based on the population of the city and on the type of supply, one schedule applying to treated waters which in most cases means a surface supply, and the other to ground water supplies. For ground water supplies these fees range from $12.50 per year for towns of less than 500 population to $50.00 for cities over 15,000. For surface water supplies a minimum fee of $30.00 is charged for towns of less than 1,500 with a maximum fee of $150.00 for cities of over 10,000.

In the case of private supplies used by common carriers, a fixed annual charge of $30.00 is made. These supplies are inspected and analyzed twice annually.

Under the ruling that bottled waters were public water supplies under the Kansas Statute, it is necessary for complete chemical and sanitary bacteriological analyses to be made on each supply annually and since an analysis alone does not insure a safe quality of water, inspections are made as regularly as possible.

In the checking of ice supplies, it is required that a 50 pound cake be submitted to the laboratory for analysis before the supply is placed on sale for domestic consumption. Further, the ice supply is subject to sanitary inspection at any time by department representatives who may collect samples for further analysis should there be reasonable doubt as to its quality.

In the case of bottled waters and ice supplies, formal Board of Health approval is given by an annual license, for which a prescribed fee to cover cost of laboratory work is charged.

Since cross-connected private supplies may become public supplies should water be forced back into the public water supply mains, such supplies are subject to a regular inspection and analysis so long as the cross-connection exists.

The policy of covering the cost of the laboratory analysis either by prescribed annual fees or by individual analysis

charges has proven very satisfactory. In this way, those who benefit by the work done carry their proportionate part of the operating cost of the laboratory.

The regular routine checking by laboratory analysis of public water supplies by the State Department, undoubtedly has had its effect in increasing general public interest in the sanitary quality of water supplies both public and private. An increasing number of cities have municipal or private local laboratory service available and in these cities the reports of the state laboratory are supplemented by the reports of the local laboratory.

While the main purpose of the state laboratory is to provide for a regular bacteriological examination of public water supplies, the service is extended to private supplies, a nominal charge being made to cover the cost of analysis. At the present time considerable interest is being given to those semi-public water supplies that are found along our main highways and are used by the travelling public. It is probable that arrangements will be made for the analysis of these supplies and the marking of those found safe for use. Tourist camp regulations require the regular analysis of any water supply used for drinking purposes in these camps.

The services of the laboratory are also called for in the sanitary control of public swimming pools. Although there are no regulations requiring swimming pool operators to have bacteriological examinations made of the pool water, many operators do have such tests made in order to assist them in maintaining a sanitary pool.

Considerable interest is taken in the annual summary of the analysis of surface water supplies. This summary, is a tabulation which shows the total number of sets of samples sent in during the year and the per cent of these samples that were reported back to the city as excellent, good, fair, doubtful or bad, from a bacteriological standpoint. In comparing one city with another, the element of regularity with which samples are sent to the laboratory is given consideration as well as the bacterial quality shown by the analyses.

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UNIVERSITY OF KANSAS CLINICS

Clinic of Lawrence P. Engel, M.D.

Department of Surgery.

THE PREOPERATIVE PREPARATION OF THE TOXIC GOITER PATIENT.

Thyroidectomy is by far the most important step in the treatment of the patient with a toxic goiter, but cannot always be safely done at any time. It should be done when the patient is best able to stand it, and when the goiter itself is in a state that offers the fewest technical difficulties in its removal. Careful treatment and observation and considerable patience are necessary until this time arrives, which may be weeks or even months from the time the patient is first observed. It is only with this preoperative preparation that the clinic will briefly deal. The presence of a toxic goiter is no longer an indication for immediate surgical intervention. Formerly this was true to a great extent and in cases where the patients were believed unable to go safely through a complete thyroidectomy, they were subjected to ligations and multiple stage operations which often resulted fatally. If this type of case is carefully treated, and operation deferred until the patient is in the best possible condition, thyroidectomy can then be safely done in one stage.

Three types of toxic goiter are generally recognized: 1. Exophthalmic, 2. Toxic adenoma and, 3. Secondary toxic colloid. The preoperative preparation of these is in most respects the same. The only real difference in the treatment of these three types is the administration of Lugol's solution and digitalis, which will be discussed later. The secondary toxic colloid is, as a rule, the slowest to yeld to treatment and is usually the poorest surgical risk. This is because it occurs in old individuals in whom permanent and often extensive visceral damage has been done, particularly to the myocardium, and because the degenerative changes, which produce the toxic symptoms, tend to progress.

In all toxic goiters the symptoms occur or become exaggerated in fairly well defined cycles or crises. This is most marked in the exophthalmic type and least so in the secondary toxic colloid. The ideal time for operation is between crises and this "resting" stage should be patiently awaited. Much can be done to help bring the patient to this stage and there are definite signs and symptoms which aid in its recognition. The symptoms are of course most marked when the patients are in the crisis or headed toward it and too often it is not until this time that they seek relief. For this reason, many patients are in the worst possible stage for operation when they first present themselves for treatment and must be carefully carried along until the thyrotoxic crisis subsides. Too frequently, the

fear of operation causes them to waste much valuable time with the various cults, quacks, and fake goiter remedies. Some of the more acute, fulminating cases do not subside but progress violently to a fatal termination.

The degreee of the thyrotoxicosis and the stage the patient is in, as regards the thyroid crisis, can be quite accurately determined by a careful history and physical examination. The history should contain accurate information as to the duration of the goiter, the time of onset of toxic symptoms and an inquiry into the rise and fall of symptoms. The weight is a reliable index to the rate of metabolism and variations should be recorded, giving the maximum, minimum, and present weight. Nervousness, palpitation of the heart, polyphagia, easy fatigue, quadriceps weakness and all the common symptoms of toxic goiter should be investigated. The simplest and one of the most reliable methods of deciding what stage the patient is in is to ask her how she feels now as compared with how she felt a few weeks or months ago. If all the symptoms are worse and she is still losing weight she is either in the crisis or approaching it. If on the other hand the symptoms are improving and there has been some gain in weight she is recovering from a crisis. Unfortunately it is not always that easy and in cases where the symptoms remain stationary for a long time it is very difficult to tell. If the symptoms are severe for a long time and the patient describes them as the worst she has ever had, it is probably a prolonged crisis. If, however, the symptoms are mild for a long time and there is a history of greater severity in the past, the patient is probably as near the "resting" stage as she ever will be without treatment or operation.

In the examination, the degree of the usual signs as tachycardia, tremor, exophthalmos etc., will determine to a great extent the degree of the thyrotoxicosis. Evidence of visceral changes should be looked for and the condition of the heart estimated as nearly as possible. A single basal metabolic rate determination will help establish the degree of toxicity at that particular time but a series of readings taken at intervals of 3 or 4 days or a week is necessary to determine whether the patient is approaching a crisis or recovering from one.

When it has been decided that it is best not to operate at once, the patient is then told that a certain amount of preparation is necessary in order for her to be in the best possible condition. Often this bit of information is interpreted as meaning that the operation is a very dangerous procedure and she will begin to worry about it. A tactful explanation, however, will do much to allay her fears and gain her confidence and in a few days, when she begins to improve under treatment, she immediately sees the value of it, and ceases to worry.

Complete physical and mental rest is essential. All physical exertion should be graduated depending upon the condition of the cardiovascular system. All mental and nervous strain must be avoided and nothing is allowed to excite the patient. Sedatives are of great value and must sometimes be administered generously. If bromides fail, luminal is given and nearly always with very good results. Luminal is probably best given in ½ grain doses 3 or 4 times a day according to the demands of the case. If there is sleeplessness on this dosage a larger dose may be given at bedtime. For single doses given at bedtime one of the many hypnotics as Amytal, Ipral, Allonal, Phanodorm, etc., may be employed.

Forced feeding is always the rule especially in those patients who have lost a great deal of weight. This is usually welcomed for most of them have very good appetites, and at times a voracious appetite is one of the most prominent symptoms of the disease. The diet should be rich in carbohydrates and supplementary feedings of eggnogs, malted milk, orangeade, or lemonade, with lactos added, or any of the foods and drinks of high caloric content may be given between the regular meals.

Under rest and sedatives and as the patient's general condition improves, the heart will slow down and regain its tone. The statement has often been made that digitalis is of no value in the goiter heart. This may be true in the acute exophthalmic goiter, where the heart condition is merely a tachycardia and in this type of case digitalis may actually be harmful. It is of definite benefit in the long standing cases of thyrotoxicosis where there is an auricular fibrillation present or any signs of myocardial damage and loss of tone. A cardiac lesion which existed prior to the onset of the toxic goiter symptoms is also an indication for its use. Such cases which are digitalized before the operation have a minimum amount of cardiac disturbance postoperatively.

Lugol's solution is now almost indispensable in the preparation of the true exoph-

thalmic goiter patient for operation, but is best withheld until about two weeks before operation. If possible it is much better to wait for a natural recovery from a crisis and then give the Lugol's solution to prevent a postoperative metabolic crisis. The danger in giving it too soon is that the patient will be ready for operation before the goiter and at operation the gland is found to be very friable and vascular and tightly adherent to surrounding structures, so that careful resection is very difficult. It has been definitely shown that, in doses of 5 to 10 min., three times a day, the maximum beneficial effect from Lugol's solution is obtained within two weeks and in most cases within one week. In true exophthalmic goiter the improvement under Lugol's solution is frequently almost miraculous but in other types it will aggravate the condition. In a few of the other types where proliferative changes are present small doses may be of value. The best rule is never to give Lugol's solution except in pure exophthalmic goiter and then only in preparation for operation. If given this way it will greatly diminish the postoperative reaction.

By giving more attention to the preoperative preparation of the toxic goiter patient and choosing with more care the time for thyroidectomy, the end results will be much better and the operative mortality greatly reduced.

Clinic of Dr. Frederick B. Campbell

Department of Obstetrics

RECTAL COMPLICATIONS FOLLOWING PARTURITION

This patient comes to the clinic with the complaint that she has been troubled with hemorrhoids since her confinement two months ago. She says that she has had slight constipation and occasionally some rectal pain during this time, but never any protrusion or bleeding. For the past ten days defecation has been postponed as long as possible because of the cutting, burning pain which accompanies each movement and lasts from one to six hours afterwards. Except for nervousness she is comfortable during intervals.

Upon examination the perineum, cervix and uterus are found to be normal. The external sphincter is tightly contracted, leaving the anal opening a mere slit. This is always indicative of irritation within the anal canal. By very gently separating the anal folds the lower angle of a small fissure is observed at the anterior commissure. A drop of 10 per cent cocaine will permit of a more thorough inspection and local applications.

From the history alone we may be reasonably assured that the patient has a fissure. The only thing that we should be careful to rule out is an acute ano-rectitis or gonorrheal rectitis, a disease being recognized more frequently since we are on the lookout for it. A smear will promptly settle this matter, as acute gonorrheal rectitis will show pus cells and diplococci identical with an acute process elsewhere and remarkedly free from intestinal organisms.

Fissure occurs at the point in the anal circumference which is subjected to the greatest degree of stretching and trauma for it is this segment in which a tear occurs. Due to the muscular arrangement and the direction of the anal canal, we always look for and usually find the fissure at the posterior commissure. Obviously during delivery the greatest strain is anterior, and it is here that the post partum fissure is usually found. The infected skin tab known as a sentinal pile is not present in the acute cases, but will develop if the process continues. The sequence of events in this case, then, are first a tear in the skin of the anal canal, second—low grade infection, third—a tendency to grow progressively worse, due to poor drainage, constant contamination and sphincteric spasm.

The typical fissure, pictured here must be differentiated from the small multiple fissures which are the result of an excoriated skin from the discharges of an ano-rectitis.

Treatment is effective if the patient is intelligent and co-operative and it is carefully explained to her. The following procedures are often effective if started early in the disease; (a) Avoid a roughage diet. Bran or other particles which may lodge in the fissure may cause trauma, extension of infection and pain. (b) A mineral oil preparation t. i. d. sufficient to keep the feces soft. (c) Argyrol, ten per cent, drams 2 injected after each movement. (d) Anaesthesin gr 30, thymol-iodid and bismuth subnitrate aa drams 1, vaseline q. s., oz 1. This is effective only if the patient can be taught to place some of the ointment on the finger and firmly press it into the fissure. (e) The water cooled quartz light is of great value in relieving pain and stimulating healing. (f) When medical measures fail, the proper surgical procedures are always prompt and effective in giving relief.

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W. E. McVEY, M.D. - - Editor

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ANNUAL MEETING

The annual meeting at Hutchinson, May 3, 4, and 5, promises to be one of the most interesting and practical in the history of the Society. A glance over the program is sufficient to convince one who may be skeptical.

It should be one of the largest meetings because of the central location and the large territory from which there is easy access. There should be, and certainly will be, many new faces at this meeting.

There not only will be a very interesting program but there will be plenty of entertainment as the following extract from a letter from Dr. Scales suggests.

"We hope that as many doctors will bring their wives as possible, as quite a great deal of entertainment has been provided for the ladies. Mrs. G. R. Gage is chairman of this committee and will have at all times some one to assist the ladies in doing whatever they wish to do.

"On the first day at 4:00 p, m, there will be a tea at the residence of one of our doctors. On the second day at 1:00 p. m. there will be a luncheon at the Rorabaugh-Wiley Tea Room. On the third day from 10:00 to 11:30 a. m. the swimming pool at the Y.M.C.A. has been turned over to the ladies and any one who wishes can have a swim in the fine pool there.

"In addition to this the golf course will be open and anyone who wishes to play will be provided for. The ladies, of course, will be expected to attend the dinner on the second day.

"For the men we expect to have on the first day a golf tournament at the Hutchinson Country Club. This will be under the direction of Dr. H. D. Sterrett, and it would be well for any member who wishes to play in the tournament to write to Dr. Sterrett, giving his handicap, also his average score. Any member who wishes to play golf after the sessions are over will be taken care of and can play at either the Hutchinson Country Club or the Carey Lake Golf Club.

"On the evening of the second day there will be a dinner at the Masonic Temple Building. This will be for both the doctors and their ladies, and suitable entertainment will be provided in addition to the dinner."

Since the organization of the Women's Auxiliary there is a particular reason why the members should bring their wives. Why not make the membership in the Auxiliary one hundred per cent? This organization can be a great help in advertising scientific medicine.

If all attend this meeting at Hutchinson that should attend and can attend, it will be something to talk about in the years to come. We have about 1600 members but we rarely have more than 400 in attendance. With those in easy access from the western part of the state, a large attendance from Wichita, and those that always attend from Kansas City and Topeka, there should be nearer 600 at this next meeting.

STORMONT LIBRARY

Nearly forty years ago Mrs. Jane Stormont, the widow of Dr. D. W. Stormont, presented to the Society a medical library and established an endowment fund for its maintenance. It was a provision of this bequesst that the library should be kept in the state library rooms in the state capitol

building. It was also provided that a committee appointed by the Society, acting with the state librarian, should select the books to be purchased then and thereafter.

For a good many years there was a standing committee on Stormont Medical Library which functioned as provided in the bequest. Vacancies in the committee, occasioned by death or removal, were filled by the Society, but finally a resolution was adopted providing that Dr. C. A. McGuire be the permanent committee on Stormont Medical Library.

For a good many years regular reports on the library, prepared by the librarian, were submitted at the annual meetings of the Society. Since the death of J. L. King, formerly State Librarian, no reports have been submitted. A little investigation shows that no recognition of the existence and ownership of the Stormont Library is made in our constitution and by-laws and no provision is made for the appointment of a committee as provided for in the bequest.

The fact seems to be that the members of the society know very little about the Stormont Library, few of them consult the books there and very few, at least during the past ten or twelve years, have requested to borrow books from the library although arrangements were made for it many years ago.

Those who have taken the trouble to visit the section of the state library in which the medical books are kept have generally been impressed with the idea that it could be made of great value to the profession of the state. It is regrettable that it has been so much neglected, but there is a very excellent foundation there upon which, with the funds available from the Stormont endowment, a very serviceable library can be built up.

In order that this matter may come before the House of Delegates at the next annual meeting the following resolution to amend the by-laws will be submitted.

Resolved that section 1, chapter IX, of the By-laws be amended by inserting after the third paragraph of said section, the following:—A committee on Stormont Library to be composed of three members, one of whom shall be a resident of Topeka.

Resolved that the following section be added to chapter IX of the by-laws and be designated as section 4:—

The Committee on Stormont Library shall co-operate with the State Librarian and advise said State Librarian as to the proper medical books and magazines to be purchased, as to the care and indexing of the same, and shall suggest such changes or improvements as will in their judgment make the Stormont Library of the greatest service to the medical profession of Kansas.

Resolved that the present section 4, chapter IX of the by-laws be hereafter designated as section 5 of said chapter IX.

THE NURSE PROBLEM

In the early nineties there were very few graduate nurses in this state. Those that were here found only occasional demand for their services for which they charged fifteen dollars per week.

Now there are a great many graduate nurses in the state, they are seldom idle if they care to work and their regular charge is $42.00 per week.

n several states the medical profession is seriously agitated over what is called the growing aristocracy of the trained nurse. Conferences are held, committees are appointed and the demand continually made that something be done about it.

In those early days, there were few trained nurses, there were very few training schools, and, in fact, there were comparatively few hospitals in this part of the country, at least.

There were plenty of good old souls among the women who liked to nurse sick people, some of them for pay and some of them for the pleasure of it. They could do many things for the patients but were not much help to the doctors. Their instincts and their experience were their dependence and they could not be taught to do things for which they could not understand the reasons.

A little experience with graduates from a training school soon convinced the doctors that in these trained women he not only had a nurse but an assistant. One who not only knew how to do all that the untrained nurses could do for the patient, and could prepare proper kinds of diet, but could take the pulse, temperature and respiration, could catheterize the patient or give a hypodermic injection if required and do a great many other things that could not be trusted to the practical nurse or the neighborly nurse. It was very natural that, since she relieved him of some of his responsibility and a great deal of the detail, the doctor should more and more frequently demand that a trained nurse be put on his cases.

The good old soul who was so kind, and patient and sympathetic, soon had no place to go and finally dropped out of the picture. The doctors were then not sorry to see her exit, for good as she was, she was nevertheless trying to their temper. She did not hesitate to advise him about the case, tell him what a great remedy a cranberry poultice was in erysipelas, or how old Dr. Brown, long since passed away, had treated cases just like this one.

The doctors found in the trained nurse a very helpful assistant and they wanted to make them more helpful. They wanted to use them as surgical assistants and as office assistants, technicians, etc. And, since the doctors practically controlled the trainiy schools it was natural that the curriculum should be expanded and advanced.

The doctors appreciated the assistance given them by these trained nurses. They praised them highly to themselves and to the people employing them. After a favorable issue in a doubtful case they would sometimes tell the patient and his friends that all the credit was due to the splendid care given by the trained nurse. It was not uncommon for doctors to say that all a typhoid fever case needed was a good trained nurse on the job. They finally came to believe it and there are few of them that hesitate to criticize the doctor who fails to follow their conception of the proper methods for the treatment of such cases.

If the nurses of today are overtrained the medical profession is to blame. A casual review of the very many textbooks that have been prepared for use in training schools will show that most of them have been prepared by doctors who belong to the teaching staff of some training school, that these textbooks indicate what the author thinks the nurse should know about that particular subject, and that most of them have the idea that nurses in training should have practically the same course of study as the medical student. In some of the training schools the whole field of medicine is covered, the pupils are given complete courses of lectures in anatomy, physiology, chemistry, pharmacology, bacteriology, pathology, symptomatology, obstetrics, gynecology, surgery, practice of medicine and all the specialties. All this instruction is wasted on many of them—many of them that become very excellent nurses but not quite as good assistants to the doctors.

It is doubtful if many of us would feel satisfied now with the old time nurses, in fact, one may be quite sure that it is not the overtraining that is the most objectionable feature of the present situation but rather the estimate the trained nurse has put upon the value of her services.

A good deal of stress is put on the expenditure of time and money in securing a medical degree and one frequently hears it said that the average earnings of a practitioner do not justify so large an investment. The medical student puts in four years of nine months each in his college work. The nurse puts in three years of twelve months each in her hospital train ing. The medical student pays a tuition and pays for his board. The student nurse pays no tuition but works for her board and when she has finished will not usually be able to work continuously if the opportun ity offers. If one compares the scale of wages adopted by the nurses associations with the scale demanded by skilled labor unions it must be admitted that the nurse is not overpaid.

The trouble, however, lies in the fact that while the trained nurses are not overpaid the majority of the people who require the services of a nurse are unable to pay the wages now demanded.

The problem is to supply the people with efficient services at a wage they can pay and the solution of the problem lies with the hospitals and training schools. No one cares to consider a return to the old time nurse, but a distinction might be made between a trained nurse and a medical assistant.

If an intelligent, fairly well educated girl cannot be taught enough in one year in a good hospital to properly care for a sick patient another two years wont add much to her ability in that direction. She probably wont know very much about medicine, but she will be able to do all that it is necessary for her to do as a nurse. There is no reason why the training schools should not arrange to give the didactic course in principles and practice of nursing during the first year and teach the first year classes by demonstration and experience how to nurse the sick; and at the end of the year give these students a certificate of proficiency.

There will be a sufficient number of pupils desiring to take a complete course to supply all the demand for the completely trained graduate nurses. A nurse that has had a year of thorough hospital training would fill all the requirements of ordinary cases. Where the exigencies of the case demand the services of one acquainted with the symptomatology and course of a disease, one competent to meet such emergencies as are likely to arise, the graduate nurse must be employed; and there will always be sufficient demand for them to justify the continuation of the complete training school course.

From reports it seems that the Illinois State Association of nurses has put into effect a policy under which its members are refusing to accept twenty-four hour duty as private nurses in public hospitals and the scale of wages there is fifty dollars a week. If a hospital case requires a special nurse at all, it requires twenty-four hours service. That means that in Illinois a hospital patient requiring a special nurse, must employ two, at fifty dollars a week each, and if as in this state, the patient must also pay for their board, that is at least ten dollars a week more—a total of $120.00 for nursing.

There are only two conditions that justify the employment of graduate nurses for special duty in hospitals that conduct a training school. One is a scarcity of student nurses, but an apparent scarcity of students is sometimes due to the fact that most of their time is consumed in the class room. This condition can be corrected by using for practical instruction half, possibly two-thirds, of the time consumed in trying to teach them a lot of things they cannot learn and would be of no practical use to them if they did learn. The other condition is the expressed desire on the part of the patient for a graduate nurse. Pupil nurses can be put on special duty and will give efficient service if their work is supervised by a competent head nurse. Putting the pupils on duty as specials gives them training and experience in the kind of service they are expecting to give after they have graduated; and they should have it.

This kind of special nurse could be furnished by the hospitals at twenty-five dollars a week. This would be a welcome addition to the income of most every hospital. A plan of this kind would encourage the people to go to the hospital when they are sick. A great many of them could better afford to go to the hospital and have a student nurse than to stay at home and hire a graduate nurse at the present scale of wages.

One may freely discuss this very serious problem in the care of the sick without in any degree minimizing the importance of, and necessity for, the highly trained nurse, but one does not need a landscape artist to paint a fence.

CHIPS

The various arguments on the subject of birth control, its economic bearings and moral effects, are affording a good deal of self satisfaction to the men who write them but it is doubtful if they influence in any way the attitude of the people most concerned. The fact seems to be that very few married women are having children if they don't want them. They seem to have taken the matter pretty much into their own hands, and if they are seeking information or advice, they have the experience of their friends and acquaintances to draw from.

Julius H. Hurst, Washington, in a letter to the London Lancet gives this formula for the treatment of influenza—Quinine hydrochloride, camphor monobromate, hexamethylenamine of each 2 grains, methylene blue 1 grain, well rubbed in a mortar, in a capsule. One capsule to be given at the onset, followed if necessary in 4 hours by a second. Not more than 4 should be given in 24 hours. He claims most of his cases required only three in all.

The Botelho reaction for cancer may prove of considerable value if further investigation confirms the reports already made. Bloom of San Francisco has reported tests in 67 cases in which positive reactions were observed in 36. Operation and further observation proved that the test was accurate in at least 80 per cent. The test is negative in all healthy persons. It is positive in pneumonia, psoriasis, achylia gastrica, colitis and those vaccinated against rabies; as well as in cases of cancer.

From a study of 195 cases of pulmonary embolism following operation and 12 cases following fracture, Lister (London Lancet, January 15) concludes that the outstanding factors in post operative pulmonary embolism are the age of the patient and an incision through the abdominal wall. Free muscular action and well balanced respiration both costal and diaphragmatic are the most important factors in maintaining efficient venous circulation. Free muscular action is conspicuous by its absence in the treatment of fractures of the femur and it is suggested that inhibition of diaphragmatic respiration accounts for the comparatively high incidence of embolism after operations through the anterior abdominal wall.

In a report of his observation of goiter by John Francis Hagerty, contributed to the December number of the Surgical Clinics of North America, he said: "In our experience profound psychic impressions have invariably appeared to be the exciting cause of toxic change in the gland. Not puberty, nor heredity, nor child-bearing, nor previous illnesses, nor focal infections, but a history of grief, anxiety, worry, and severe mental strain can always be elicited on questioning these patients."

In discussing the advisability of routine x-ray of the thymus in surgery, Graves and Perkins, in the Medical Clinics of North America for January, say: "If one could investigate every case of sudden death unexplained by known lesions, including those of the first weeks of life ascribed to atelectasis and congenital cardiac disease without murmur, those in infancy due to unexplained convulsions, those occasionally following the administration of antitoxin, those resulting from anesthesia, trauma, and minor surgery (such as thoracentesis) he would gain a most enlightening conception of the frequency of the complex and rarely recognized condition which we are considering."

The successful treatment of arthritis with sodium salicylate and acetylsalicylic acid seems to depend upon the amount administered and its long continued administration, according to Blake F. Donaldson, Medical Clinics of North America, January. His plan is to give large doses for a minimum of eighteen months. At the beginning the patients are kept saturated with the drug for from three to seven days. This is done by the administration of retention enemas, twice a day, of from 50 to 100 grains of sodium salicylate in two ounces of thin boiled starch solution. Following the course of retention enemas, sodium salicylate or acetylsalicylic acid is given by mouth in doses of from ten to fifteen grains, with food, three time a day. The drug being taken in the middle of the meal. This routine is followed daily for three months and then on alternate weeks for the next fifteen months. The cases reported seem to justify the author's confidence in this method of treatment.

The following is quoted from an article on arthritis by Donaldson in the Medical Clinics of North America, January:

"The oft-noted relationship of sore throats, ascessed teeth, growing pains, chorea, scarlet fever, peritonsillar abscess, carditis and arthritis casts suspicion on the

streptococcus as either a primary or secondary invader of the joints. If this is the case, it seems idle to imagine that removal of the original focus will modify the joint condition in any way other than to prevent additional infection. And clinical observation seems to bear this out. In the very few cases of arthritis who experience after tonsilectomy immediate relief of pain or swelling or stiffness, it is probable that we are dealing with a joint irrated by an exogenous toxin. These cases seldom show radiographic evidence of a joint lesion."

During the past three or four years there have been reported in European countries a considerable number of cases of encephalitis following vaccination against smallpox. Sixty-two cases have occurred in England and thirty-six in Holland. The onset of the acute cerebral symptoms has usually occurred in from eight to twelve days after the vaccination. Efforts to find the vaccinia virus in the nervous system of the children who have died have almost invariably failed. The London Lancet, in a discussion of the probable relation of vaccination to the occurrence of these cases of encephalitis concludes that it is at least a contributory cause, but the evidence so far found does not justify a conclusion as to whether the vaccinia virus does or does not play an active part in the causation of encephalitis.

From his studies on duodenal drainage in biliary disease, based on the examination of fifty cases, Lay Martin, in the Archives of Internal Medicine for March, has reached the conclusion that medical drainage of the biliary duct is of relatively little value as a diagnostic procedure, that the origin of B bile is unknown, that biliary sediment has no practical diagnostic significance and that the appearance of white blood cells is of relatively small help, that bacteriological studies are valueless and may lead one to make an incorrect estimate. Bile thrombi have a definite pathologic significance. The finding of parasites is of great importance. The total absence of biliary secretion and the presence of pancreatic enzymes is of great help in making a differential diagnosis.

Middleton and Chen report some studies of the effects of ephedrine on forty-one patients (Arch. Int. Med., March), They found that when given by mouth, in the form of sulphate or hydrochloride it caused a rise in systolic blood pressure—an average rise of 28.5 millimeters of mercury and the average duration of the rise was five hours and nine minutes. The diastolic pressure was also elevated. The therapeutic dose for oral administration in adults is from one to one and one-half grains. In a group of twenty-five patients with bronchial asthma, ephedrine controlled the attacks, in nine instances, caused improvement in eight others, but showed inconclusive or negative results in the remainder.

There is a clinic of Actinology conducted by the "Institute" in Paris, France, for the treatment of tuberculosis. The patients play in a sea beach inclosure forty feet square with the walls covered with bright aluminum for reflection and the blinding mercury lamps above. Such playful, mirthful automatic therapy.

The accidental poisoning of a number of infants with a boric acid solution, in a Chicago hospital, has called attention to the toxic properties of boric acid. It might be well to suggest that the use of a saturated solution of this drug for washing the nipples of a nursing mother is not entirely harmless. Infants have sometimes developed serious intestinal disturbances that disappeared when the use of boric acid solution for washing the nipple was stopped. At any rate it is a wise precaution to have the breasts and nipples carefully washed with sterile water before the infant is allowed to nurse.

SOCIETIES

PROGRAM

Sixty-first Annual Meeting, Kansas Medical Society, Tuesday, Wednesday and Thursday, May 3rd, 4th and 5th, Hutchinson, Kansas

All general sessions will be held in the Masonic Temple.

The following guests of honor will address the Society:

Dr. Jabez N. Jackson, President of the American Medical Association, Kansas City, Mo.

Dr. Dean Lewis, Surgeon-in-Chief, Johns Hopkins Hospital, Baltimore, Mr.

Dr. Albert H. Andrews, Eye, Ear, Nose and Throat Specialist, Chicago, Ill.

Dr. Arthur Steindler, Professor of Orthopedic Surgery, University of Iowa, Iowa City, Iowa.

Dr. L. J. Moorman, Medical Director, Moorman Sanatoria for Tuberculosis, Oklahoma City, Okla.

Dr. Alfred Schalek, Professor of Derma-

tology, University of Nebraska, Omaha, Neb.

PROGRAM

"Accomplishments of Preventive Medicine"—Dr. Earle G. Brown, President, Topeka.

Tribute to Dr. B. F. Morgan—Dr. C. C. Stillman, Morganville.

"Some Features in Medical Legislation" —Dr. J. A. Milligan (Garnett.

Discussion opened by Dr. F. A. Car-Michael, Osawatomie.

"Appendix Problems"—Dr. Jabez N. Jackson, Kansas City, Mo.

"The Family Doctor—the Surgeon and the Evaluation of the Referred Patient as a Risk"—Dr. I. P. Parker, Hill City.

Discussion opened by Dr. C. H. Jameson, Hays.

"The Use of Iodized Oil in the Visualization of the Bronchial Tree"—Dr. L. G. Allen, Kansas City.

Discussion opened by Dr. Guy Finney, Topeka.

"The Care of Children in General Practice"—Dr. Frank Neff, University of Kansas, Rosedale.

Discussion by Dr. Earle G. Padfield, Salina.

"Diphtheria Control in Kansas"—Dr. C. H. Kinnamon, Topeka.

Discussion opened by Dr. N. P. Sherwood, Lawrence.

"Nephritis and Nephrosis in Children" —Dr. George E. Paine, Hutchinson.

Discussion opened by Dr. H. J. Duvall, Hutchinson.

"The Differentiation and Diagnosis of Bone Lesions"—Dr. Dean Lewis, Baltimore, Maryland.

"A Case of Pyloric Stenosis with Enormously Dilated Stomach," with lantern slides—Dr. F. A. Trump, Ottawa.

Discussion opened by Dr. J. H. A. Webb, Wichita.

"Surgical Treatment of a Typical Hypertrophied Prostate," with report of cases—Dr. John L. Grove, Newton.

Discussion opened by Dr. Arthur D. Gray, Topeka.

"Conduct of Labor"—Dr. M. W. Hall, Wichita.

Discussion opened by Dr. J. D. Clark, Wichita.

"The Fifth Nerve and its Reflexes"—Dr. Albert H. Andrews, Chicago.

"Suicides"—Dr. Karl A. Menninger, Topeka.

Discussion opened by Dr. M. L. Perry, Topeka.

Coronary Occlusion"—Dr. C. E. Coburn, Kansas City.

Discussion opened by Dr. C. H. Chickering, Hutchinson.

"The Use of Iodides in Goitre"—Dr. V. E. Chesky, Halstead.

Discussion opened by Dr. E. L. Kalbfleisch, Newton.

"Early Diagnosis of Clinical Pulmonary Tuberculosis"—Dr. L. J. Moorman, Oklahoma City, Okla.

"Post-operative Thrombo Phlebitis"—Dr. David W. Basham, Wichita.

Discussion opened by Dr. L. F. Barney, Kansas City.

"Problems of Drainage in Vertebral Disease"—Dr. Arthur Steindler, University of Iowa, Iowa City, Iowa.

"Dermatological Clinic"—Dr. Alfred Schalek, Omaha, Nebr.

"Syphillis of the Stomach" with case reports—Dr. E. H. Terrell, Wichita.

"Discussion opened by Dr. H. N. Tihen, Wichita.

"An Epidemic of Endocarditis"—Dr. J. H. A. Peck, St. Francis.

Discussion opened by Dr. E. F. Leininger, Atwood.

"Some Diagnostic Points in Thrombo-Angitis Obliterans"—Dr. L. V. Hill, Kansas City.

Discussion opened by Dr. T. G. Orr, Rosedale.

"Safety in Surgery"—Dr. C. S. Newman, Pittsburg.

Discussion opened by Dr. Alfred O'Donnell, Ellsworth.

"Spinal Anesthesia"—Dr. W. E. Mowery, Salina.

Discussion opened by Dr. L. O. Nordstrom, Belleville.

"The Care of the Aged"—Dr. J. F. Brewer, Minneapolis.

Discussion opened by Milton O. Nyberg, Wichita.

"The Minute Circulation of the Cerebro-Spinal Substance," illustrated with lantern slides—Dr. J. T. Scott, St. John.

Discussion opened by Dr. W. F. Bernsdorf, Pratt.

"Surgical Disease of the Biliary Tract" —Dr. H. C. Embry, Great Bend.

Discussion opened by Dr. Marion Trueheart, Sterling.

"Non-penetrating Wounds of the Abdomen"—Dr. J. E. Campbell, Pratt.

Discussion opened by H. E. Haskins, Kingman.

ANNOUNCEMENTS

Meeting of the Council

The Council of Kansas Medical Society

will meet in the Rorabaugh-Wiley Tea Room, Tuesday, May 3, at 12:15 p. m. at a Dutch luncheon. Other meetings of the Council will be held at the call of the President.

Meeting of the House of Delegates

Tuesday, May 3rd

The House of Delegates will meet in the Assembly Room of the Masonic Temple at 7:30 p. m.

Thursday, May 5th

The meeting of the House of Delegates will be held in the Red Cross Room of the Masonic Temple at 8:00 a. m.

Meeting of the Secretaries

There will be a complimentary luncheon for the Secretaries of all County Societies on Wednesday, May 4th, at 12:15 p. m. in the French Room of the Rorabaugh-Wiley Tea Room.

ENTERTAINMENT

The Reno County Medical Society will give a banquet, followed by an entertainment, in the Assembly Room of the Masonic Temple, May 4th at 6:30 p. m., for the members and guests of Kansas Medical Society, their wives and sweethearts.

Golf tournament on Monday, May 2, at Hutchinson Country Club. All members and guests wishing to play in the tournament will please write to Dr. H. D. Sterrett, Director, giving his handicap and average score. The courtesy of the Carey Golf Club has also been extended to the members and guests.

KANSAS MEDICAL AUXILIARY

Tuesday, May 3

9 to 12 a. m. Registration, Bisonte Hotel.

4 p. m. Tea.

Wednesday, May 4

1:30 p. m.—Luncheon at the Rorabaugh-Wiley Tea Room, followed by the annual business meeting of Kansas Medical Auxiiliary. The order of business will be as follows:

Address.

Report of officers.

Election of officers.

6:30 p, m,—All members and guests are invited to attend the banquet given by Reno County Medical Society.

Thursday, May 5th

10 to 11 a. m.—Swimming at the Y. M. C. A..

Golf courses will be open to the ladies.

HOTELS

Bisonte Hotel, Headquarters; Stamey, Midland, Chalmers, Reno and Baldwin.

OTTAWA COUNTY SOCIETY.

The Ottawa County Medical Society met at a dinner session March 2nd, all but one member being present.

It was voted that the society would in the near future obtain some well known orthopedist to give a public lecture on crippled children, and if possible have him remain over the next day and hold a clinic, the doctors here presenting patients with interesting orthopedic conditions and diseases.

Dr. J. F. Brewer had a discussion on the management of the toxemia of pregnancy.

Following a general discussion it was moved that the following resolution be made and adopted, and that a copy of the resolution be included in the minutes of the meeting and sent to the state secretary.

Be it resolved that the Ottawa County Medical Society in regular session condemns the recommendation of Fleischman's yeast, by Forrest C. (Phog) Allen, one of the faculty members of Kansas University, which advertisement has been seen in different periodicals and magazines and has been given wide publicity.

Be it further resolved that the faculty of the Kansas University Medical School, who should be best qualififed to pass upon the merits of the above said yeast and its physiological action be and are hereby requested to state whether or not they concur in the opinion of their brother faculty member who so recommends this yeast.

Be it further resolved that the people of the great commonwealth of Kansas are entitled to know the opinion of the medical faculty on the aforesaid subject, since such wide publicity has been given this yeast through the prominence of the faculty member, Forrest C. (Phog) Allen, who has recommended it.

The invitation to hold the next meeting with Dr. J. F. Brewer, was accepted.

C. M. Vermillion, Secy.

NORTHEAST KANSAS MEDICAL SOCIETY.

The annual meeting of the Northeast Kansas Medical Society was held at the University Club, Topeka, Thursday, March 24th. The following program was prepared for their meeting.

Marvin Hall, M.D., Retroperitoneal Tumer (Case report)

A. H. Marshall, M.D., Hodgkin's Disease.

I. O. Church, M.D., Tertiary Syphilis.

H. J. Davis, M.D., Scarlet Fever (Case report.)

Merrill Mills, M.D., Gastric Ulcer.

M. B. Miller, M.D., Pneumococcic Osteomyelitis of the Leg.

C. E. Joss, M.D., Exophthalmic Goiter.

A. D. Gray, M.D., Urethral Stones.

F. L. Loveland, M.D., Mitral Stenosis associated with Phthisis.

L. S. Powell, M.D., Frontal and Maxillary Sinusitis, Operated.

Omer M. Raines, M.D., Lymphatic Cyst.

F. C. Boggs, M.D., Ocular Palsy.

F. A. Koester, M. D., Dental Therapy in Mental Diseases.

G. H. Litsinger, M.D., Chronic Otitis Media.

C. F. Menninger, M.D., Inventory and appraisement.

The following officers were elected: President, M. B. Miller, Topeka: Vice-president, J. L. Everhardy, Leavenworth: Secretary-Treasurer, Earle G. Brown, Topeka.

The following amendments to the constitution and by-laws were adopted:

Article 1. Sec., 2. The territory over which this society shall exercise jurisdiction shall comprise the counties of Atchison, Doniphan, Douglas, Jackson, Jefferson, Johnson, Leavenworth, Shawnee and Wyandotte.

Article 11. Sec. 1 The membership of the Northeast Kansas Medical Society shall be composed of the members of it's component county medical societies.

Article 111. Sec., 3. The president shall appoint a nominating committee of three members among those present and it shall be the duty of this nominating committee to present at the annual meeting, a list of nominees for the several elective offices.

By Laws, Article 111. The funds of this society shall be provided by a ten cent per capita assessment upon the component medical societies.

Supper was served at the club rooms. There were sixty-eight members present.

SALINE COUNTY MEDICAL SOCIETY.

The Saline County Medical Society met in regular monthly session, Chamber of Commerce Rooms, City Hall, Salina, March 10, Dr. C. M. Fitzpatrick,, President, presiding.

There were present twenty-one of the thirty-one members; and five visitors, Drs. Alfred O'Donnell, Clair O'Donnell, and Benjamin Mayer of Ellsworth, Dr. George E. Davis of Kanopolis, and Dr. P. W. Beckman of Lindsborg.

After the routine business, Dr. J. W. Neptune presented "The Marshall County Plan" as given in the American Medical Association Bulletin, February, 1927, page 37. After some discussion of this plan, a committee, composed of Drs. J. W. Neptune, A. G. Anderson and E. G. Padfield, was appointed to investigate the plan and to report at the next meeting of the society.

No clinical cases were presented.

The program of the evening consisted of two very interesting and valuable papers: "Diabetes Mellitus" by Dr. Leo Schafer, Salina, and discussed by Drs. Alfred O' Donnell, Ellsworth and Drs. Vermillion, Fowler, Sutton and Padfield of Salina.

"Some Observations in Gall-bladder Disease" by Dr. Alfred O'Donnell, Ellsworth, and discussed by Drs. Mayer of Ellsworth, Beckman of Lindsborg, and Schafer, Mowery, Walker, Seitz, Porter Brown, Fowler and Fitzpatrick of Salina.

On suggestion of Dr. P. W. Beckman of Lindsborg, the secretary was instructed to correspond with the secretary of the McPherson County Medical Society relative to a joint session of the two societies in the near future.

E. G. Ganoung, Secretary.

STAFFORD COUNTY SOCIETY.

The Society met in St. John Wednesday, March 9th, at 3:00 p. m. The following members attended—F. W. Tretbar, T. H. Shonkwiler, Stafford, M. M. Hart, Linnie Haines, Macksville, L. E. Mock, R. E. Stivison, J. T. Scott, St. John.

The guest of the Society was Mr. O. O. John, a teacher in the St. John High School. Recently a vicious, chiropractic advertisement appeared in both the local papers, attacking the use of serums, antitoxins and vaccination and urging the people to refuse to allow the public health officials to vaccinate or immunize their children or permit the use of serums in contagious diseases. It was along the line of the usual propaganda of antivivisectionists and antivaccinationists. As a result of this advertisement all the St. John physicians withdrew their professional cards from the newspaper and Mr. John wrote an open letter replying to the offensive advertisement.

By request Mr. John read his letter to the Society and after thorough discussion a motion was carried to have the letter published and 1000 copies in folder form procured for distribution.

If present plans materialize the guest of the April meeting, which will be held the second Wednesday in the month, will be Dr. Major of Kansas City who will demonstrate the steps in a Periodic Medical Ex-

amination. This should prove to be one of the best meetings of the year. Neighboring Societies will be invited.

J. T. Scott, Secretary

FRANKLIN COUNTY SOCIETY

A plea for public education that would regard insanity as any other illness, and remove so much legal red tape in the handling of insanity cases, was made here March 30 in Chamber of Commerce rooms by Dr. F. A. Carmichael, superintendent of the state hospital for the insane at Osawatomie. Dr. Carmichael was speaking at a joint session of the medical and legal fraternity with dentists, druggists and morticians as guests. The meeting was sponsored by the Franklin County Medical Association and visitors were here from adjoining counties.

Dr. Carmichael hopes for the time when resort to legal tactics may be averted by the treatment of insanity in its early stages. He said there was no onus attached to taking a man with a broken leg to a hospital for treatment, and there should be none in connection with so transporting an insane patient.

After a dinner enjoyed by 63, at which every member of the Ottawa medical fraternity was present, there was music sponsored by W. L. Cayot. The attendance was curtailed considerably because of the condition of the roads.

Judge C. A. Smart of Lawrence spoke from the legal point of view. Judge G. A. Byrd of Franklin county probate court, gave a talk from the probate court's point of view.

Judge Manford Schoonover of Garnett, in his inimitable style, made a strong plea from the humanitarian side, stressing the call for men and women who are able to see the needs in time. He paid a tribute to Dr. J. A. Milligan of Garnett, former member of the state legislature, who pioneered in the state anti-tuberculosis crusade and brought about the establishment of the state sanitarium at Norton, now the largest of its kind in America. Following the program, Mr. Cayot conducted a line party of the visitors to the Pastime theatre.

Among the visitors was Dr. Laverne B. Spake of Kansas City, councillor for the second district of the Kansas State Medical Society.

Program for the year:

The Executive Committee outlined the following program:

February meeting, a paper by Dr. W. L. Jacobus, with general discussion by all members and visitors present.

The March meeting, (reported elsewhere in this issue) stressed its second object, the moulding of allied group spirit.

The April meeting, on the 27th, will be held with a supper at the Chamber of Commerce rooms and, like all its technical meetings, is open to the members of the profession and invitation is extended to such members as are close enough to attend to come and "break bread" with us and take part in the discussions. The program will be a paper by Dr. Will Scott on "Heart Disease in Childhood," discussion led by Dr. F. A. Trump.

The May meeting, on the 25th, will feature the only outside medical talent of the year. The paper will be by Dr. William A. Shelton of Kansas City on "What to do with the Gallbladder," the discussion will be led by Dr. Speers.

The June meeting, on the 29th, will present Dr. H. E. Terrill with a paper on "General Gynecological Conditions," with clinic and case report and the discussion will be led by Dr. H. L. Gilley.

The July meeting, on the 27th, is intended to develop the social side of the membership and will be a doctors picnic at the Country Club. The executive committee, guided by experience, elected to make this an intimate association of the members and their families, with basket supper, games, golf, swimming, etc., limiting their invitations to the local morticians, who would be idle, and their families.

The August meeting, on the 31st, again will be devoted to the allied group spirit and a joint chicken dinner with the Anderson County Society will be held at the Richmond Country Club and all who were invited to the March meeting will be expected to be present. The incubators are setting now. The program of entertainment will be boating, swimming and horseshoe pitching before the dinner, which will be held at 7 p. m. and the postprandial divertissement will be furnished by the Hon. Chas. F. Griffiths, whose subject will be "God in History," illustrated by monologue readings from Shakespeare's "Julius Caesar." This meeting will be opened further to any member of the allied professions in the State who will send his name to the secretary, Dr. J. R. Scott, one day ahead.

The September meeting, on the 28th, will be a public meeting at the High School at 8 p. m. Subject and slogan, "NO DIPHTHERIA IN 1930." The school board and the Kansas State Board of Health co-oper-

ating to the end that the Society members may put on again their free immunization campaign.

The October meeting, on the 26th, Chamber of Commerce, 6 p. m., supper and technical paper to be announced later.

The November meeting, on the 30th, will be furnished by the State Board of Tuberculosis Control, co-operating with Dr. F. A. Trump, local member of the board, and the meeting will be open to the public.

The December meeting, on the 28th, will be devoted to election of officers and closing up the years' work and the January meeting, on the 25th, will be the annual banquet at the Ottawa Country Club.

George W. Davis, M. D., President.

RENO COUNTY MEDICAL SOCIETY.

On March 3rd., Reno County Medical Society met in a special way at a 6:30 dinner, served in the R-W Tea room. The occasion was complimentary to Dr. C. A. Mann who was leaving soon for Calfiornia. Dr. Mann had practiced medicine in Hutchinson for over twenty-nine years. Every member present spoke appreciatively of their friendship for the Doctor, and wished him well in his new field.

The following letter, drafted by Dr. H. J. Duvall, was read and presented to Dr. Mann, as a token of respect from the Reno County Medical Society:

Dr. C. A. Mann,

Dear Doctor—or perhaps we should say —Dear Sir and Brother: It is with keen regret that this society is called upon to say farewell to you. We shall miss your genial smile and hearty laugh.

For the past twenty-nine years, as a member of this society, your conduct has been high-minded and courteous. Always thoughtful of the other man's rights. In these years you have endeared yourself in our hearts.

Again we express our regret in your leaving us. Wherever you go we commend you to our fellow physicians. Wherever you go we wish you well.

Dr. Geo. E. Paine, President.
Dr. C. A. Boyd, Secretary.

Dr. Mann, in his own sincere manner, spoke of his appreciation of the Reno County Medical Society and particularly of this special courtesy extended him.

On March 17th., Reno County Medical Society met in regular session, at a 6:30 dinner served in the R-W Tea room. This was followed by a scientific program, other regular business having been dispensed with.

Dr. Russell Haden of Kansas City, Mo., talked to us on the subject of Focal Infection—more particularly as applied to infected teeth. Due to the nature of the program, the Reno County Dental Society was invited to join us. It proved to be a very agreeable and profitable meeting to both professions.

Dr. Haden used a number of slides to illustrate his talk.

We appreciate, very much, the opportunity of having Dr. Haden with us and of hearing, first hand, some of the things that are taking place in experimental Medicine.

C. A. Boyd, Secretary.

HARPER COUNTY SOCIETY

Harper County Medical Society met at Attica on March 30th at 8 p. m. in the office of Dr. M. P. Crisler.

Election of officers resulted in Dr. J. G. Walker, Attica, being chosen president; Dr. E. E. Ressler, Anthony, vice-president and Dr. E. R. Montzingo, secretary. Dr. G. A. Westfall of Harper was elected delegate to the state convention.

The following members were present: Drs. G. A. Westfall, of Harper; C. E. Ressler and A. E. Walker of Anthony, J. G. Walker, M. P. Crisler and E. R. Montzingo of Attica.

A paper by Dr. E. R. Montzingo on "The Treatment of Sciatica by the Injection of Various Substances," was discussed quite fully. Dr. M. P. Crisler read a paper on "The Business Side of Medical Practice," which elicited free discussion as how best to deal with the intentional "deadbeat."

Next meeting will be held at Anthony on June 15th.

E. R. Montzingo, Secy.

HARVEY COUNTY SOCIETY

The regular monthly meeting of the Harvey County Medical Society was held on April 4th. Sixteen took dinner together at the Arcade Hotel at 6:30 p. m., and then gathered at Dr. Smith's office for the program. Those present were:

Dr. W. F. Schroeder, presiding, Drs. Martin, Knowles, Kalbfleisch, Abbey, Enns, Miller, R. H. Hertzler, L. T. Smith, J. T. Axtell, L. C. Axtell, Haury, Bartel, McClymonds, Glover; and as guests, Dr. Bunton of Augusta and Dr. E. D. Ebright of Wichita.

Dr. Ebright gave a talk on "Fractures" and showed x-ray films of some of the cases he described. General discussion ensued.

The Secretary read the minutes of the

meeting of March 7th, 1927, which were approved as read.

A letter was read from the Secretary of the Bureau of Public Relations of the Kansas Medical Society, soliciting the co-operation of the members of this Society in the proper distribution of the pamphlet "The Human Machine." This was discussed and the Secretary instructed to order a supply of the pamphlets to be distributed by the members of the Society.

The Secretary then exhibited an insulated metal cabinet manufactured by Mathews Industries, Inc., of Detroit, Michigan, which is designed for the reception of bottled milk delivered by the milkman, and in which it remains protected from freezing or becoming rapidly heated, or otherwise contaminated until removed to the refrigerator by the housewife.

H. M. Glover, Secy.

MISSOURI-KANSAS NEUROPSYCHIATRIC SOCIETY.

The Missouri-Kansas Neuropsychiatric Society met at the University Club, Kansas City, Missouri, February 16, 1927. E. T. Gibson, Kansas City, presented for diagnosis a case presenting a cerebellar syndrome. N. R. Smith, Halstead, Kansas, read a paper on "Anxiety as Etiological Factor in Organic Disease." Dr. Franklin G. Ebaugh, Denver, Colorado, spoke on the Treatment of Paresis by Malaria.

E. T. Gibson, Secretary.

SHAWNEE COUNTY SOCIETY

The regular monthly meeting of the Shawnee County Medical Society was held in the offices of the National Reserve Life Insurance Company, April 4.

The following program was presented:

Dr. Mark Perrin—Orthodontia (2 clinical cases).

Dr. W. E. Michener, Medical Diathermy.

Dr. W. J. Walker—Vincent's Angina.

Dr. W. C. McDonough—Gall Bladder Disease.

Dr. S. T. Millard—Lichen Planus (clinical case).

Dr. R. W. Emerson—Blood Pressure in Anesthesia.

The resolution which was presented at the March 7th meeting, repealing the section of the by-laws relating to contract or lodge practice was not adopted.

Dr. O. F. Marcotte was elected to membership in the society.

The program was arranged by the members who have offices in the National Reserve Building and the members were served a lunch by the officers of the Insurance company, following the meeting.

Dr. Arthur Steindler, Professor of Orthopedic Surgery of the University of Iowa Medical School, will present a paper on "Enteroptosis" at the May 2, meeting of the society.

Earle G. Brown, Secy.

RESOLUTIONS

Whereas, this Society has lost a valued and esteemed member in the untimely death of Dr. Statella Fairchild. Therefore, be it

Resolved by this Society in regular meeting assembled that we express our appreciation of the splendid personal and professional attainment of our departed member and that we extend to her family our expression of sincerest sympathy in their bereavement. And, be it further

Resolved, that a copy of these resolutions be forwarded to the family of the deceased member, a copy forwarded to the State Journal and a copy be spread upon the minutes of the Miami County Medical Society.

F. A. Carmichael,
J. W. Kelley,
Committee.

NORTH EAST KANSAS SOCIETY

The annual meeting of the Northeast Kansas Medical Society was held at the University Club at Topeka, on Thursday, March 24, 1927.

The following program was presented:

Dr. Marvin Hall—Retroperitoneal Tumor (case report).

Dr. A. H. Marshall—Hodgkin's Disease (Clinical case).

Dr. I. O. Church—Tertiary Syphilis (case report).

Dr. H. J. Davis—Scarlet Fever (case report).

Dr. M. W. Miller—Gastric Ulcer, (case report).

Dr. M. B. Miller—Pneumococcus Osteomyelitis of the Leg (case report).

Dr. C. E. Joss—Toxic Goiter (case report).

Dr. A. D. Gray, Urethral Stones (case report).

Dr. F. L. Loveland—Chronic Fibroid Phthisis, Lupus Vulgaris (clinical case).

Dr. L. S. Powell—Frontal and Maxillary Sinusitis, Operated, (3 clinical cases).

Dr. Omer M. Raines—Lymphatic Cyst of the Thigh (case report).

Following the scientific program, a Dutch lunch was served. Approximately 75 members of the society attended the

meeting, the majority of them remaining for lunch.

Following the lunch Dr. C. F. Menninger presented a paper on "Inventory and Appraisement."

The following officers were elected: President, Dr. Milton B. Miller, Topeka; Vice Pres., Dr. J. L. Everhardy, Leavenworth; Secretary-Treasurer, Dr. Earle G. Brown, Topeka.

The constitution was amended so that now the Northeast Kansas Society is composed of the following counties: Atchison, Douglas, Doniphan, Jackson, Jefferson, Johnson, Leavenworth, Shawnee and Wyandotte.

Earle G. Brown, Secy.

Medical Society of the Missouri Valley.

The fortieth anniversary of the Medical Society of the Missouri Valley will be celebrated in Des Moines, Iowa, September 14th, 15th and 16th, and a banner meeting is expected. The program committee is at work assembling papers. The major portion of the essayists will be drawn from the Universities of the Missouri Valley states. The arrangements under the direction of Dr. Granville Ryan are progressing rapidly and a splendid entertainment is being prepared. Hotel Fort Des Moines will be headquarters, and the sessions will be held in the New Shrine Auditorium, with the exhibits on the lower floor. The officers of the Society are as follows:

President, T. G. Orr, M.D., Kansas City, Mo.

First Vice-President—Fred Moore M.D., Des Moines, Ia.

Second Vice-President—J. M. Patton M. D., Omaha, Neb.

Treasurer—O. C. Gebhart M.D., St. Joseph, Mo.

Secretary—Chas. Wood Fassett M.D., Kansas City, Mo.

The executive committee having the program in charge consists of the following members: Donald Macrae, M.D., Council Bluffs; J. M. Mayhew M.D., Lincoln; Granville Ryan, M.D., Des Moines; J. E. Summers, M.D., Omaha; P. T. Bohan, M.D., Kansas City; A. D. Dunn, M.D., Omaha; T. G. Orr, M.D., Kansas City (ex officio).

At this the fortieth anniversity there will be a complete reorganization of the Society. An effort will be made to present at future meetings the newest research and clinical investigations developed in the Valley. In addition several clinicians and scientists of note will be on each program.

Minutes of Meeting of Executive Committee Of Council

A meeting of the Executive Committee of the Council of Kansas Medical Society was held in the office of the secretary, Dr. J. F. Hassig, 804 Huron Bldg., Kansas City, Kansas, on March 11, at 3:00 p. m., for the purpose of electing a president, according to Chapter VI-Section 2 of our by-laws.

Dr. Geo. M. Gray was made chairman and on motion made by Dr. O. P. Davis and seconded, Dr. Earle G. Brown, Vice-President, of Topeka was made president to fill the vacancy caused by the death of our president, Dr. B. F. Morgan.

J. F. Hassig, Secretary.

DEATHS

Geo. H. Siegel, Wichita, aged 68, died March 10th, as a result of x-ray burns received in 1902. He graduated from the Kansas Medical College in 1900.

Dr. Statella Fluesmieir Fairchild, age 53 years, died February 13, 1927 from aortic insufficiency. She graduated in pharmacy at Valparaiso, Indiana, in 1895 then entered the Barnes Medical College at St. Louis, Missouri, from which she graduated in 1908. She was for a time located at Fall River, Kansas, but since 1922 has practiced in Osawatomie. She was a member of the Kansas Medical Society from Miami county.

Dr. Peter T. Bohan conducted a "Heart Clinic" before the Okmulgee County Society, February 14th. The week before Dr. Bohan was the guest of honor and speaker before the Pettis County Medical Society, at Sedalia, Missouri.

FOR SALE—On account of age, a $7,000 annual cash Eye, Ear, Nose and Throat practice that is growing at the rate of nearly $1,000 per year. A younger and better qualified man can soon raise this to $15,000 or $20,000 per year. It is the leading practice in the Upper Rio Grande Valley and can be kept so. Part cash, balance from income of office. James Miller, M.D., McAllen, Texas.

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Free Full-Thickness Skin Transplantation

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Department of Surgery

Read before the Wyandotte County Medical Society, February 15, 1927.

HISTORICAL

Centuries ago in old records concerning the tile-maker's caste in India a description is recorded of the free transplantation of full thickness skin from the gluteal region to the nose. Previous to transplantation the gluteal region was beaten, producing hyperemia. For the purpose of advertising an ointment early in the nineteenth century, two charlatans, one of whom was a woman, Gamba Curta, cut a piece of skin from their bodies, passed it around to spectators for inspection, then replaced the pieces on their original raw bed and applied their ointment with a dressing. It is related that the grafts "took" and healed with little scarring. Baronio (1804), a physiologist, aroused by the knowledge of this exhibition, experimented on a sheep's tail and successfully transplanted full thickness skin from one side to the other.

As early as 1823, Bunger of Marbury successfully transplanted a free piece of whole skin from a woman's thigh to her nose and again in 1843, J. Warren Mason, one of the famous surgeons of Boston, successfully covered the alae of the nose with a bit of detached full thickness skin from the arm. Netolitchi of Germany (1869), Lawson of London (1871), Le Fort of France (1872) undoubtedly preceded Wolfe of Edinburgh in 1875, in the successful transsplantation of whole skin. Wolfe, whose name has been connected, along with Krause of Germany, with this particular type of skin grafting, used the method for an ectropion of the eye-lid. The following year, Krause (1876) reported 21 cases at the 22nd German Surgical Congress. Now the grafts are often designated Wolfe-Krause grafts.

Thus, although isolated records of an occasional success are found here and there in the literature many years previous to Wolfe and Krause, the method was never emphasized, previous to the articles of Krause the significance of the method was not appreciated. Even these men and of course those preceding them used only small bits of skin and it remained for the method of successfully transplanting large areas — as large as 6x10 inches to be developed as recently as after the late World War—after which every known possibility in repair work was revived and if possible developed.

During the three years following the war Blair of St. Louis was especially interested in plastic repair work and during that time, a technique was developed which allowed one in an aseptic field to confidently expect at least a 90% "partial take" —irrespective of the size of the graft or its location. It had been known that these grafts usually grew best on the forehead. Here, it is apparent, one has a good smooth firm background on which to obtain uniform pressure on aplication of the ordinary dressing. Moreover, the observation has been made that a certain tension supposedly to open the minute endothelial spaces of the skin was an aid to a good "take."

Finally it became apparent that the following five factors seemed very significant to success.

(a) That the skin should be cut in a manner that left no fat attached.

(b) That a sterile field markedly increased one's chances of success.

(c) That a dry field without oozing of blood or blood clot in which all vessels were tied without massing of tissue with the finest possible suture material was important.

(d) That slight tension in all directions was of some consequence.

(e) That it was absolutely essential that moderate pressure and fixation be maintained to cause contact with the raw base —even in all the various grooves and depressions.

Previously, all five of these prerequisites to success had been emphasized but the known technique of obtaining moder-

ate pressure and fixation was often faulty. The last condition was finally more satisfactorily obtained when Blair thought of the old marine sponge which had been dropped largely from the surgical armamentarium. A large marine sponge of fine texture when damp and under compression gives a soft resilient surface pressure to an underlying uneven base and later when dry maintains a fixation somewhat similar to a cast.

As confidence of success became more certain the raw surfaces to be grafted became larger and larger until any surface was attempted, (which did not endanger the patient's life or for which skin could be obtained) with confidence in obtaining a successful result.

TYPE OF CASES

One's imagination is immediately stimulated when he pictures those cases in which a successful technique of full thickness skin transplantation is applicable.

Possibly the widest and most brilliant application includes those cases of marked cicatricial contracture following burns so familiar to surgeons on the staffs of our children's hospitals. Although the proper application of thin Thiersch grafts or "pinch grafts," along with the proper maintenance of position do much to promote a happy result, it is often impossible in the more severe burns to prevent marked contractural deformity. From the standpoint of appearance these scars are a real calamity, and when involving the neck, the axilla, the elbow, the knee or the hand, may almost totally destroy function.

In hand contractures due to scar, one can get some very remarkable results even when the tendons are just at the surface and have to be laid bare at operation. In many cases, the result is esthetically more pleasing than the old flap transplant and from the standpoint of function offers in cases without tendon loss a perfectly satisfactory result.

Ectropion due to scar of the external eye-lids or an eversion of the lids are usually best handled with the Thiersch inlay graft because it is difficult here to get a clean field for a Wolfe graft.

Certain selected cases of roentgen-ray burns with ulceration, pain, and possibly slight contracture can be relieved by excision followed by full thickness skin grafting if the destruction of soft tissue is not too deep. In the latter cases a flap transplant or a combination of a flap and a full thickness skin graft, are usually the graft methods of choice.

Hemangiomas of the face not involving the eye lids in adults offer possibilities by treatment with excision followed by whole thickness skin transplantation.

Such congenital anomalies as complete fusion of the fingers offer a very brilliant field for the application of this principle. In one operation the whole situation can be corrected as far as the soft tissues are concerned. In these cases full thickness skin transplantation offers a great advantage over pedicled flaps.

Very satisfactory eye brows can be made from the hair bearing scalp skin.

TECHNIC

The scar contractures are laid wide open as soon as a clean field is obtainable without regard to the size of the resulting raw surface, providing that the denuded surface is not of such extent as to jeopardize the life of the patient and that enough skin to cover the area can be obtained. The skin is cut by pattern from the abdomen, back or thigh, in such a manner that no subcutaneous fat remains, after which the skin is transferred to the denuded area. Hemostasis should be almost perfect. The transplant is sewed in place on a slight tension. A dressing is applied consisting of a thin layer of gauze impregnated with a mild antiseptic ointment on which is super-imposed one or many large marine sponges. The sponges are bandaged just firmly enough to get good approximation between the graft and the underlying tissue and not tight enough to cause pressure necrosis. This original dressing is not removed until eight or ten days have passed. On removal of the dressing the stitches are taken out and a moist saline gauze dressing is applied three to five times daily. The gauze is always kept moist.

When one removes the first dressing, in about 50% of the cases there will be seen a few superficial blisters. These are treated best in about the same manner that one treats a simple blister due to a burn that is, let it rupture when it gets ready, providing the contained fluid is clear. If the fluid in the bleb becomes purulent it should be opened immediately.

ULTIMATE RESULTS

In planning the operation one takes into consideration the fact that the graft will contract about one fourth and opens up the tissues very completely, over correcting



FIG. I.



FIG. II.

Figures 1 and 2 presents a case of cicatrical contracture due to an extensive burn, showing the front and side views before operative procedures were undertaken.



FIG. III.



FIG. IV.

Figures 3 and 4 (Same case as Fig. 1 and 2) now has a pedical flap beneath the chin on both sides. The large area from above the hyroid region down over the sternum shows a full thickness graft about three weeks after application. His head is now well loosened up. This boy will return after six months for final excision of unsightly scars.

the deformity as much as possible. In situations like the neck, the axilla and the fingers, the maximum amount of extentsion or flexion is obtaned, as the case may require, by cutting across or excising all scar tissue bands that are put on tension by over correction.

Blair in 1924 presented 106 cases before the American Surgical Association, practically all of which I saw. These cases included those in the developmental stage of the technique and showed an average per centage of success of 77.41 per cent. 58 per cent of these cases showed a 90 per cent "take". The average size of the transplants was 8.43 square inches. Some of these were fully as large as two hands.

The new transplant may be somewhat shiney and smooth. I once made some twenty microscopical sections of a series of these grafts removed at different periods after transplantation. The corrugations of the superficial epithelial surface which one sees in normal skin sections are absent. The epithelial surface in these sections was perfectly smooth. It was also noted that the elastic tissue of the skin showed degenerative changes. I concluded that the shiney and smooth appearance of some of these transplantations was caused by an absence of the normal skin corrugations. Degeneration of the elastic fibers of the transplant with some increase of fibroplastic tissue could explain this phenomena. Some variation is seen in the surface texture. A large majority that have shown a good "take" without superficial blistering or much superficial exfoliation of the epithelium show grossly practically normal skin texture.

Certain grafts show a tendency to pigmentary changes, usually more marked in the brunette. These pigmentary changes may be uneven and blotchy and may lessen materially the esthetic result if the graft has been applied to the face. As a rule, the younger the patient the better the "take."

Even when the blisters become infected and the superficial squamous epithelial layer is cast off, if the infection is stopped the surface of the deeper layers may become covered with epithelium and give functionally a very satisfactory result; altho this occurence increases the tendency to future shrinkage. These damaged areas usually remain more pigmented and darker in color, varying in appearance from the non-damaged part of the graft, somewhat as epitheliated scar differs in appearance from normal skin.

The majority of the hairs and hair follicles in areas that have "taken well" grow nearly normally so that in transplantation, one should not use hair bearing skin unless hair is desired.

After four to six weeks a thin layer of adipose tissue forms beneath a full thickness graft and the skin loosens from the underlying tissue, becoming movable. Thiersch grafts do not do this to any great extent. Beginning about six weeks after transplantation a new nerve supply starts in from the edges. First, tactile sensibility, then pain and last temperature sense appears. A large graft may not regain sensation for more than a year. A depressed area successfully grafted fills up to the level of the normal surroundng skin after some months.

DISCUSSION

The main advantages of the full thickness graft are (1) that contraction is markedly less than following a Thiersch graft (A Thiersch graft does not give a satisfactory result in these markedly deformed cases); (2) that in the palm of the hand, for example, and other areas subjected to considerable trauma, full thickness grafts will give a good functional result if there is any soft tissue between the graft and the bone; (3) that in certain congenital anomalies as, for instance, web fingers it offers a method giving a good result in one operation; (4) that in certain disfiguring facial blemishes it has possibilities not possessed by other types of skin transplants.

If the bone is nearly bare or thickness is desired a flap transplant offers advantages not otherwise obtainable. The disadvantage of a flap is first, that its thickness in certain areas gives a clumsy result less pleasing from the esthetic standpoint, and second, that several operations are required. The Wolfe graft can be transplanted usually in one or two operations. The flap transplant however, has its distinct indications and probably is more useful in the various phases of plastic surgery than the full thickness graft. The Thiersch graft has the advantage that it will grow in an unclean field. From the standpoint of appearance a full thickness graft in successful cases is far superior to the Thiersch graft which is generally pale and white. The Wolfe graft in good "takes" appears, eventually, as normal skin.

NOTE — I am indebted to Dr. T. G. Orr for the case illustrated. The pedical flaps had been very successfully transplanted by Dr. Orr before I saw the case.

The Management of Bow Legs, Knock Knees and Flat Feet in Children

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Often I have been impressed with the fact that many doctors are at a loss to know how to advise parents who present their young children for the consderation of faulty conditions of their legs and feet. At the outset of the discussion I wish to say that not always is it possible to determine at once the proper procedure; but there is a definite plan to follow in the management of these cases. No one can tell whether or not a child with bow legs will itself correct this condition; yet it is an indisputable fact that many children do. However, very few children with knock knees will improve without aid; every child with a positive knee valgus should be given attention; and flat feet in children should be thought of as weak feet.

Bow legs or knock knees never are caused by the normal child walking too soon, but are the result of the bones being too soft; thus suggesting faulty nutrition. If the child is under-nourished attention to this condition is just as important as attention to the deformity.

In the management of cases of bow legs, one should keep in mind that in children under three years of age whose nutrition is subnormal, usually it is possible to secure correction by proper diet and hygiene combined with daily manipulative measures executed by the parents.. Certainly these means should be tried and the case observed. In the cases that are well nourished or in those where the parents have bow legs, conservative measures may be tried, but the likelihood of success is not great. In either of the above mentioned types in cases of children under three years of age, when it has been determined that the bowing has not decreased, braces should be applied. The braces are all similar; the principle being to pull the leg into the corrected position. (See illustration No. 1).

After a child has passed the age of four years and has a considerable degree of bow leg deformity, braces will not effect a correction. The proper treatment at this time is to perform an osteotomy and correct the bowing as well as the rotation that usually is present; then, put the legs in a double plaster of paris cast for six weeks. At the end of this time, the cast should be removed and measurement made for braces. The cast should be re-applied until the braces are ready for wear, at which time the child should be permitted to run about in braces for a period of six months to a year. If braces cannot be obtained, then the casts should be re-applied and changed at intervals but kept on for four or five months and the child encouraged to be active. It is necessary for these cases to have the protection of braces or plaster for this length of time on account of the knee joints. The correction of the bone does not rectify the



Illustration No. 1—Simple bow Leg braces applied.

weight bearing lines of the joints. This comes with weight bearing and better results will be secured with protection.

Needless to say ,in cases of bow legs careful attention should be given to the diet. These cases need fats, such as cream, butter, bacon and soups. They should also have cod liver oil routinely. Early attention to

these dietetic factors will correct the condition in a large per cent of cases.

Knock knees are similar in origin to bow legs; but unlike bow legs, do not tend to correct themselves spontaneously. In children under three years, the inner sides of the heels and soles of the shoes should be raised one quarter of an inch and daily manipulation and general attention to the diet as suggested for bow legs should be instituted. In a large per cent of cases, these measures will prove eminently satisfactory; and it is absurd to submit such patients to operation. However, as was suggested in discussing bow legs, there are a few cases that will require braces and some that will require an operation. Those that seem to inherit the condition, or those that are of the heavy type usually do not respond to palliative measures. In the heavy



Illustration No. 2—Inner edges of heels and soles raised one-quarter inch. This alteration should be made for children with weak feet or with knock knees.

types endocrine disturbances should be thought of. As in bow legs after the child has passed four years of age, operative measures (usually a supracondylar osteotomy), followed by plaster casts and braces for six months or more are required.

The manipulation method that I employ for knock knee is as follows: With the child lying on a bed or table, the knee is grasped and held firmly in one hand; with the other hand, the ankle is grasped and a slow gradual pressure is made on the knee, relaxing it at intervals and then increasing the tension until the deformity is over corrected, holding it in this position for a time, and repeating the performance for the other leg. For bow legs, the procedure is practically reversed, except that the heel of the hand that grasps the knee is allowed to come into contact with the outer apex of the bow. In cases of either knock knees or bow legs, the mother or father of the patient is instructed to perform this manipulation at least twice a day.

In regarding flat feet, this discussion will be limited to the so-called idiopathic type and no consideration will be given to the acquired forms resulting from paralysis or other diseases or injuries.

The feet of all infants are flat primarily. At least they have the appearance of being flat, due to the fat pad that normally is present along the plantar fascia. When the child begins to walk, the entire sole of the foot is in contact with the floor. This permits better balancing and so assists the child in learning to walk. If the muscles are balanced properly and maintain a normal tone, the feet gradually assume an arch, due to the absorption of the fat pad. If, however, from any cause the muscles relax, the foot will pronate or roll into valgus as the fat pad is absorbed and so becomes a weak foot. In this condition, the natural instinct of the lay mind is to put high shoes on the child. This further weakens the foot muscles and thereby tends to insure a corresponding increase in the deformity.

The case of flat or weak feet should be treated by putting the patient into low shoes, thereby allowing free action of the ligaments and foot muscles, thus stimulating development. The heels and soles of the shoes should be raised by wedge-shaped pieces of leather being placed along the inner border of each, the same as for knock knees. (See illustration No. 2). Usually, one quarter of an inch in thickness is sufficient to roll the foot out into the proper position of weight bearing. Occasionally, a felt pad placed under the posterior arch of the foot is required to secure the proper balance. If these children be permitted to go bare footed a portion of the time, a great improvement in the muscle tone will be noted. This also is contrary to the general belief and some parents are reluctant to permit it.

Arch supports and rigid shoes not only limit the muscle action but restrict the blood supply, thereby causing further loss of muscle tone and atrophy, preventing the maintenance of the proper balance of the foot, even after re-molding of the bones has

been accomplished. Therefore attention to nutrition and activity is just as essential in weak feet as in bow legs or knock knees. Occasionally operative procedures are required for the rectification of bony deformities in congenital flat foot, but such cases are extremely rare; and, after the bony deformity has been righted, correct posture can be maintained only by proper muscle balance and tone.

In conclusion I wish to say that it is the duty of the doctor when these cases present themselves to interest himself first, in the general nutrition of the child; second, in seeing that proper shoes with alterations are secured; third, that the child be kept under observation and managed as indicated.

———B———

The Malaria Treatment for Neurosyphilis

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The limited space here forbids much more than a resume of this subject. A somewhat complete treatise on therapeutic malarial inoculation necessarily would cover a great many pages. The conclusions of the author are drawn from an analysis of a fairly voluminous literature and his own cases treated during the past two years. If the reader wishes to study more minutely the various phases of this treatment, he may be referred to Wagner von Jauregg, Gerstmann, and Ferraro and Fong and many other articles. Gerstmann in his monograph of 229 pages, and Ferraro and Fong have appended excellent, large bibliographies.

From time to time, covering a period of more than fifty years, foreign proteins and bacterial toxins have been used in the treatment of organic diseases of the brain as well as some purely functional psychoses. Several personal experiences with incidental complicating infections, producing apparently beneficial results in the course of some neuropsychiatric disorders, might be cited. Tuberculin, typhoid toxin, the organism of relapsing fever and the malarial parasite in particular might be mentioned.

Jauregg began his experimental work with foreign proteins in 1887, and by his work first reported in 1917, is responsible for the use of the tertian malarial organism in the treatment of paresis as seen today.

Only the tertian type of plasmodium has been used. This holds largely because the parasite is so readily controlled, being promptly destroyed by appropriate doses of quinine. It is something of a problem to find a proper source for inoculation. In the state of Kansas malaria is found only in a few counties and then to a limited extent.

Three principal sources have been employed for the inoculation. 1. Anopheles mosquitoes carrying the tertian malaria are seldom used for obvious reasons. 2. Non-syphilitic patients with tertian malaria would make the ideal source for obtaining the organism. But malaria is seldom found in many states, and even in the southern states the disease is not so common compared with a generation ago, thanks to medical science and modern sanitation. Comparatively few patients in this country are inoculated by this means. 3. The vast majority have the plasmodium introduced by using the blood of a case of paresis or other metaluetic disease under malaria treatment. Accuracy in the diagnosis is indicated. We do not believe that a case of active metaluetic disease is susceptible to a new syphilitic infection. Furthermore it is not expected that spirochetes thrive or live in blood loaded with tertian malarial organisms and their toxins. No quinine or arsenicals should be used before or during the course.

METHOD OF INOCULATION

A quantity of blood ranging from 1 to 7 c.c. is removed from an arm vein, using an ordinary intravenous needle and syringe. Take it from the donor preferably at the height of or shortly following a malarial paroxysm. This gives the highest percentage of successful inoculations, although blood taken at any hour might furnish the desired results. If possible the donor and recipient should be close at hand so that the transfer may be carried out quickly. If the blood is to be held for any length of time it should be citrated and kept at a temperature of about 98 degrees Fahrenheit. The longer the blood remains outside of the body the smaller will be the percentage of successes. Proper aseptic precautions should be exercised at all times. The blood may be introduced by the subcutaneous, intramuscular or intravenous routes. If by the intravenous method, use proper precautions relative to coagulation. The intravenous method probably is more certain, and reduces the incubation period about three days.

SYMPTOMS AND COURSE

The symptoms and course for tertian malaria varies considerably. The incubation period ranges from 2 to 30 days. Much emphasis is placed on the temperature.

Even this is frequently uncertain. From the same strain we may have the typical paroxysms every other day or every day. Quite irregular temperatures frequently are encountered. It may range from 102 to 106 degrees F. for three to five hours every other day. Typical chills occur in about fifty per cent of the cases. Wtih the paroxysm an increased pulse and respiratory rate may be observed. Other toxic manifestations appear in a few days. These include general malaise, increasing weakness, impaired appetite, reduction in weight, coated or dry tongue, and especially herpes labialis. One of my cases had the herpetic eruption on the lips with very little increased temperature at any time.

All clinicians appreciate the value of the examination of the blood of a suspected patient for malaria, and particularly to determine the type. However, it may not always be easy to find plasmodia in every case and at every stage even though we suspect their presence. It is possible that they could be found in the internal or glandular organs and not in the peripheral circulation where the blood has been removed for staining. During the course there is a gradual destruction of the red blood corpuscles with a definite and at times marked reduction in the hemoglobin. This feature has some prognostic value, and is a guide as to when to check the treatment.

WHEN TO STOP THE TREATMENT

We do not always agree with the Irishman who believing that he got some benefit from the small dosage directed by the physician, and thinking that an increased dosage would produce a parallel improvement, proceeded to use a strikingly toxic dosage with serious results. However, it is believed that a maximum amount of the malaria treatment should be allowed the patient. Here is opportunity for good scientific judgment by the therapeutist. Each patient should be treated as an individual. Some writers advocate a certain number of chills, frequently giving figures ranging from eight to fifteen. We cannot be guided solely by the number of malarial paroxysms. In the first place some patients will tolerate much more than others for several reasons. I am guided partially by the number of chills, the tolerance of the individual patient. the various toxic effects, and especially the reduction of the number of erythrocytes and hemoglobin percentage. I have had two patients where it was necessary to stop with six paroxysms. Again one of my cases tolerated quite well twenty-two definite ones. As indicated above, it is not always possible to count exactly the number of chills.

HOW TO CHECK THE MALARIA

Quinine is a real specific for tertain malaria. It is merely a matter of selecting the dosage. With all of my cases it has been found quite satisfactory to give the medicine by mouth. The dose for an adult usually ranges from one half to one gram three times per day. A course of quinine treatment for at least one week is essential in all cases. In some it is necessary to give the quinine over a period of ten to fifteen days. A repetition of the treatment is required infrequently. If there is any question about the cessation of the malaria, a few doses of neoarsphenamine may be given. Arsenic too will destroy plasmodia, to say nothing about the spirocheticidal possibilities. An illustrative case may be cited briefly. A patient with paresis treated at Bell Memorial Hospital had tolerated fairly well some twelve indefinite paroxysms. He was markedly toxic with severe labial herpes, and had a fair reduction of the erythrocyte count and hemoglobin. Suddenly there appeared a marked myocardial weakness. At once he was given one half gram doses of quinine sulphate by mouth three times per day. Severe chills ceased at once. However, he frequently had about a half a degree of temperature during the first week of treatment. Then the dosage was increased to one gram which was tolerated well and which checked the fever promptly.

DANGERS

The immediate dangers may be divided into two groups: (1) complications due directly to the malaria and (2) mortality. The first is of lesser importance. A few minor complications can be taken care of readily.

The direct mortality rate resulting from the treatment warrants careful consideration. No patient, relative or guardian should be told that the treatment is harmless. In a review of the literature, and selecting at random 1019 cases, I find an average mortality rate of 13.7 per cent. Mortality rates ranging from 2.5 per cent to 28.4 per cent are noted. 32 personal cases observed have had a mortality rate of 9.4 per cent. Had I desired to maintain a low mortality rate, two of my fatal cases never would have been selected for the treatment. One was that of a physician with tabo-paresis, and complicated with nephritis and

other troubles. He himself and his medical advisers desired the treatment despite the great danger. Another was a man with well advanced tabes, with some early paretic manifestations, and in extremis physically. I feel that the deaths can be kept below 5 per cent by a judicious selection of cases. Reflect on past prognosis for paresis. Nearly all these patients have died within from one to five years following a certain diagnosis. Most of the paretics have been a great burden and a dangerous menace to society and themselves. Therefore, the mortality rate quoted is comparatively insignificant.

SELECTION OF CASES

The malaria treatment may be used for paresis, tabo-paresis, tabes, metaluetic optic atrophies, chronic degenerative syphilitic myelitis, and a few other uncommon types of late syphilis. In selecting cases of paresis and tabes, avoid those with much nephritis, serious myocardial or aortic troubles and objectionable states of inanition. Never can we hope to restore brain functions where many neurons have been destroyed with a concomitant extensive gliosis, by any treatment. The very early stage of paresis is the choice one.

RESULTS

It is certainly too early to draw final conclusions relative to what may be accomplishsed by this new method of treatment. An analysis including some 3500 cases reported in the literature and my own, showed a wide variation in the results. For paresis satisfactory remissions vary from 8 to 50 per cent. Perferably should we wait at least one year from the time of the treatment before final conclusions are made. Ultimately a five or ten year period will be interesting. We have no good practical mechanical scale by which to judge all the cases. Individual interpretations vary considerably. Gerstmann with 400 cases, reports 33.2 with good results. Kirby gives 35 per cent. It is not always an easy matter to follow up cases year after year. I have four patients suffering from paresis who were given the malaria treatment and whom I have been able to observe adequately for a long period. These men are doing a certain amount of work and getting along in society fairly well. Without the malaria treatment I feel that each man would be dead or locked up in some institution today. Tabes compared with paresis seems to offer less favorable possibilities for therapeutic malaria.

GENERAL SUMMARY

1.—Today the malaria treatment for metaluetic disorders, and especially paresis, vies with tryparsamide. Comparative values five or ten years hence will be interesting.

2.—Certainly many cases of paresis have shown remarkable improvement with malaria; and that did not yield to a number of other therapeutic methods or courses, including iodides, mercury, bismuth and the various arsenicals.

3.—Other therapeutic measures and hygienic attention is indicated for a long period following the course of malaria.

4.—Second or third inoculations with the tertian parasite may be indicated after a proper interval.

5.—Especially would I admonish that careful physical, neurological, psychiatric, and adequate spinal fluid examinations be made before considering this treatment.

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Hypertonic Salt Solution in the Treatment of Superficial Infections

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Since the Lister period of antisepsis, we have all fallen into the habit of depending upon chemical germicides in our treatment of superficial infections, granulating surfaces, sinuses, abscess cavities and similar lesions. We have used and discarded one after another of them from carbolic acid to mercurochrome which at present is preeminent in the field. They have all fallen short of the performance we have expected of them. The reason they have done so is that they can kill only those bacteria with which they come into contact. The bacteria lying deep in the inflamed walls of these lesions are the ones causing the disturbance and as yet no germicide has been discovered which has a penetrative power sufficient to reach them unless it is used in such strength as to cause it to kill living tissue cells as well as bacteria.

The theory upon which the use of hyper-

tonic salt solution is based compels our attention. We know that non-colloid bodies in solution pass through semi-permeable membranes in the direction of the fluid exerting the higher osmotic pressure. So when we remember that the cells forming the walls of abscesses, granulating surfaces and sinuses constitute a semi-permeable membrane, it follows that when we place in contact with this membrane, a hypertonic salt solution, there must be an excursion of the cell plasma and of the lymph surrounding the cells in the direction of the hypertonic solution. This reversal of the direction of the lymph flow must inevitably carry out with it toxins and living bacteria that have been lodged in the depths of the inflammatory wall surrounding the lesion. In other words, the toxins and bacteria are, by these physical means, removed from the tissues where they are doing damage and carried into the dressing where they are harmless. It doesn't matter whether the bacteria are killed or not.

This plan of treating infected lesions was first given wide prestige by the medical department of the British army, Sir Almoth E. Wright and A. E. Morrison having worked out its details. The results gotten in the management of the badly infected war wounds were excellent.

Various substances such as sodium chloride, sodium citrate, glycerine, glycerite of boroglyceride, glucose, and magnesium sulphate in a variety of combinations have been used, but the principle of their action is the same. It would seem that magnesium sulphate has certain advantages over other salts as it is less painful, exerting as it does a local anesthetic effect; it is not readily absorbed; it definitely inhibits bacterial growth and it is easily obtained at a low cost.

I have used this plan in treating flat granulating surfaces following burns, perionychia, lacerated wounds, infected compound fractures, osteomyelitis after osteotomy has been done, fistulous tracts, chronic empyema cavities, chronic endocervicitis, cellulitis, boils and carbuncles. The results have been uniformly satisfactory.

The technic of treatment differs slightly with the character of the lesion. For boils, carbuncles, perionychia and flat granulating surfaces, it is best to use a paste made in the following manner: Heat a mortar and pestle. Place a quantity of glycerine in the mortar and gradually stir into it dried magnesium sulphate until a thick paste is formed. This must be kept in an hermetically sealed container until used as the mixture rapidly absorbs moisture from the air. It is applied to the lesion and the dressing is covered with a piece of oiled silk.

Another technic I have used in the treatment of boils and carbuncles in which the necrotic area is already pointing, is to destroy the pellicle of skin with 95 per cent phenol on a small wooden applicator thinly covered with cotton letting it form a small tunnel into the necrotic area. Usually a little pus escapes but it is important to refrain from squeezing the inflamed tissue as squeezing tends to break down the protective barrier of leucocytes which has been thrown up about the nidus of infection. Gently fill this tunnel with crystals of magnesium sulphate. In twelve or twenty-four hours, you will find that considerable pus and lymph have drained into the dressing and the tunnel is much larger and will take a larger quantity of crystals. This process is repeated until the slough has separated and the lesion presents a clean healthy granulating wall. It is especially amazing to note how rapidly the general symptoms of toxemia subside after this treatment is begun; how rapidly the slough separates and the wound fills in with granulations, and how relatively slight the resultant scar is.

For sinuses too small to permit the introduction of the paste, and in large abscess cavities like chronic emypema of the pleura, I prefer to use a solution made after the lowing formula:

Magnesium sulphate	50 parts
Glycerine	10 parts
Boiling water	40 parts

On cooling, the salt recrystallizes from this supersaturated solution; so it is necessary to heat it in a water bath each time before using.

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Cholecystectomy in Gall Tract Disease

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Any logical treatment of the gall bladder should be based upon a knowledge of the embryology, anatomy, physiology and pathology of the entire gall tract. Since the liver, gall bladder, gall ducts, duodenum and pancreas all arise from the same embryonic intestinal tract bud it is reasonable to expect that these organs may be associated in their functions and their diseases. Such is certainly true and diseases of the gall bladder should always be considered a part

of a possible disease of any or all of the above organs.

In the presence of established disease of the gall tract what is the proper surgical treatment? This must obviously be answered from the standpoint of the various types of diseases of this tract and must take into consideration the general condition of the patient. It is my present opinion that, if consistent with operative safety, cholecystectomy should be done in all infections of the gall bladder serious enough to require surgery of this organ. I hope to support this opinion in the brief discussion which follows.

When an abdomen is opened and the gall tract examined what are the cardinal points which indicate to the operator that surgery of the gall bladder is advisable? It is quite well known to those who do considerable upper abdominal surgery that the gall bladder at times shows very little gross evidence of pathology in spite of definite history and physical findings of gall tract disease. There are five definite signs of pathology of the gall bladder which should be kept in mind whenever this organ is examined at the operating table. They are (1) evidence of chronic hepatitis, (2) thickening of the gall bladder wall with change in color from the normal slaty blue, (3) presence of gall stones, (4) adhesions to the gall bladder and (5) enlarged lymph node at or near the junction of the common and cystic ducts. If these signs are kept in mind a gall bladder will rarely be needlessly removed.

Some of the arguments that have been presented favoring cholecystostomy are as follows:

1. It is a safer operation.
2. The gall bladder may be needed later if the common duct becomes obstructed.
3. Drains the infected gall tract.
4. Avoids dilatation of common duct which follows cholecystectomy.

Cholecystectomy is indicated for the following reasons:

1. It removes the diseased gall bladder.
2. Avoids recurrence of disease or stones necessitating another operation.
3. It prevents disabling adhesions from multiple operations.

There are undoubtedly some cases in which drainage of the gall bladder is indicated. In acute infections or empyema it is often unsafe to subject a patient to more than the minimum of surgical procedure to relieve the symptoms. This also applies to some cases of common duct obstruction in which jaundice is a marked symptom and liver damage is suspected. The pathology of a chronic infection of the gall bladder is found within the wall and not usually in the contents of the bladder. Simple drainage is not to be expected to effect a cure in all cases. If the infection is relieved by drainage the gall bladder tissue still remains and, like the appendix is prone to develop a recurrence.

Drainage of an infected gall tract is a rational procedure in acute infections. If there is evidence of acute cholangeitis associated with gall bladder disease or, if a tender liver indicates an active liver involvement, either cholecystostomy or a cholecystectomy with cystic duct drainage should be done. A. S. Lobingier of Los Angeles recommends drainage of the cystic duct in all cases of cholecystectomy in the belief that such drainage reduces the infection in the liver and pancreas.

The following reports indicate the futility of gall bladder drainage in some cases.

Case I.

Mrs. L. D. Age 41. History of gall tract disease 11 years. Drainage of gall bladder in 1919 with removal of stones. Second drainage in 1920 with removal of stones. Fistula persisted after this operation for two years. Cholecystectomy in 1925. Gall bladder found full of stones. This obviously a case in which the gall bladder should have been removed at the first operation. Gall stones found in the gall bladder three times.

Case II.

Mrs. M. L., Age 39. Exploratory operation for gall stones eight and one half years ago. No stones found and gall bladder not opened or removed. Three years ago gall bladder drained with some relief for one year. Present symptoms for two years with increase in severity five years before admission to hospital. Cholecystectomy in Jan. 1927. Adhesions very extensive in right upper quadrant of abdomen involving abdominal wall, colon, liver, gall bladder, duodenum and pyloric end of stomach. Evidently a peritonitis followed the cholecystostomy. Cholecystectomy was probably indicated at the first exploration eight and one half years ago.

There is a difference of opinion among surgeons in regard to abdominal drainage following cholecystectomy. Some believe that primary closure of the abdomen is perfectly safe if the operative technic has been good. It is undoubtedly true that a large percentage of patients will do well without

drainage, but the exception, with infection or leakage of bile, might prove disastrous. I believe that it is best judgment, especially for the occasional operator, to drain the abdomen in practically all cases after removal of the gall bladder.

The great danger of the discharge of infected bile within the peritoneal cavity is well known. McWilliams (Annals of Surgery, 1912) reported a death rate of 48 per cent in perforations of the infected biliary tract. In the experimental animal (dog) a biliary fistula draining directly into the peritoneal cavity results in death in 1 to 3 days. Death is apparently due to cholemia since the peritoneal bile is often found sterile. Many cases of traumatic rupture of the biliary tract in the human have resulted in death, but with less rapidity than in the experimental animal. Death is probably the result of the absorption of bile salts which in the dog act more rapidly because of a greater percentage of toxic taurocholic acid.

Is there any danger at operation in peritoneal soiling with concentrated bile from the gall bladder in chronic gall bladder disease? There is danger from two possible sources—infection and bile salts. Death may be the result of either if sufficiently extensive in a patient with poor resistance. Another factor of great importance as far as morbidity is concerned is the formation of extensive disabling adhesions which are the result of careless surgery with its needless trauma, spilling of bile and spreading of infection. Any surgeon who has removed a few gall bladders after previous drainage must have been impressed by the frequently extensive adhesions and wondered how so much peritoneal irritation could have been produced by simple cholecystostomy. Such patients have undoubtedly in many cases been made worse by operation. Their gall bladder disease has not been cured and the pathology has been increased. Such results warrant our most conscientious consideration. In any operation on the gall bladder or gall ducts great care should be taken not to permit bile to escape into the abdomen. If cholecystostomy is to be done the gall bladder should be thoroughly emptied with a trocar before making the incision for a drainage tube. If there is no history of common duct obstruction with fever, chill and jaundice, it is rarely necessary to open either the gall bladder or common duct when doing cholecystectomy unless the latter is found dilated.

Cholecystectomy for disease of the gall tract does not result in 100 per cent cures. This is quite to be expected when extensive pathologic changes exist in the liver and perhaps in the pancreas, with adhesions involving the duodenum, pylorus and transverse colon as a result of advanced disease, acute infection or multiple operations. Johnson and Pearre (Southern Medical Journal, Dec. 1925) report 60 per cent of their patients cured and 37.5 per cent improved after cholecystectomy. With cholecystostomy they cured 51 per cent and improved 42 per cent. While these results probably represent the average obtained in all cases by most surgeons, any such statistics should be carefully analysed before definite conclusions are drawn. In our hands choleystectomy as a secondary operation has proven less satisfactory from a curative standpoint than has this operation when done primarily. To properly estimate the value of this operative procedure it should be judged without the handicap of a previous operation making cure more difficult.

Good results with cholecystectomy will depend to a great extent upon early treatment. Diagnoses are now being made earlier in the disease and I feel sure that our operative cures will be greater in the future.

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Recent Advances in the Treatment of Pernicious Anemia

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Every clinician realizes how unsatisfactory has been the treatment of pernicious anemia. Many different drugs and methods of treatment have been suggested. Hydrochloric acid in large doses, arsenic and transfusion have stood the test of time as therapeutic measures of proven value. Conner[1] has recently reported promising results from the oral administration of gentian violet and acrivolet. The measures employed have however, only aided in initiating or prolonging remissions. They have not materially altered the inevitably fatal course of the disease.

Most students of pernicious anemia agree that the disease must be of gastro-intestinal origin. Numerous workers beginning with Herter have thought that poisons having an affinity for the hematopoietic and nervous systems may be due to the predominance of B. Welchii in the intestinal flora. The proof offered for this view is not convincing. The same may be said for the

theory that certain types of yeasts may be the causative agent. The absence of free hydrochloric acid is a constant finding in pernicious anemia. It is most probable that digestion in the absence of free acid is constantly abnormal, especially with reference to the splitting of proteins and fats. It is quite possible that such is the source of the toxic bodies in this disease.

Clinicians have emphasized that patients suffering from pernicious anemia have often taken for a long time an incomplete diet. Bohan[2] has especially called attention to the fact that there is commonly a protein deficiency over a long period. Patients sometimes give a history of taking an excess of fats.

Koessler, Mauer and Laughlin[3] think that changes in the viability and permeability of the intestinal wall may be important factors. Certain products of normal digestion are toxic if introduced into the blood stream. Normally the intestinal wall is an effectual barrier to the entrance of poisons into the blood. McCarrison has pointed out the very striking changes which take place in the intestinal wall as the result of vitamin deficiency. Koessler, Mauer and Laughlin produced a marked anemia in the rat by feeding a vitamin deficient diet, which they think is due to altered permeability of the intestinal wall. They state that suggestive good results have been obtained in patients with pernicious anemia by feeding a vitamin rich diet.

Certainly the most promising results so far obtained from any method of treatment of pernicious anemia are those reported recently by Minot and Murphy[4]. They have treated a large series of patients with a full protein diet including at least a half pound of liver a day. Fats have been much restricted, and fruit and vegetables supplied in abundance but liver is seemingly the most important item in the diet. The use of liver is thoroughly justified from experimental work since Whipple and Robscheit-Robbins[5] found that it is especially valuable in hastening blood regeneration in dogs with experimental anemia.

It is as yet not clear whether the favorable action is due to the fact that liver is a complete protein or contains some specific antihemolytic factor. Conclusions must certainly be cautiously drawn since pernicious anemia often runs a bizarre course with frequent spontaneous remissions. Clinicians elswhere are, however, experiencing equally good results as those reported by Minot and Murphy by the proper use of the diet suggested by the Boston investigators. There is uniformly a rise in the reticulocytes and a fall in the icterus index indicating there is more active regeneration and less active destruction of red cells with the liver diet.

In Table 1 is shown the diet recommended by Minot and Murphy[6]. It is essentially a high protein diet, containing about 200 grams of mammalian liver each day, rich in fruit and vegetables, sharply limited in fats and including only a small amount of milk.

I have had excellent results with this diet in all cases of pernicious anemia in which it has been used.

The following case history illustrates well the effect of the diet in contrast with other therapeutic measures.

CASE HISTORY

M. B., a housewife, age 40, was first seen in May, 1925, complaining of weakness, shortness of breath and nausea. She had had no serious disease before the onset of her present illness. She stated that she had not felt well for three years. For several months she had had increasing gastro-intestinal disturbances, especially belching and distention, weakness and distention. Before admission to the hospital she had had sore tongue and mouth, tingling of the hands and feet and had lost 20 pounds in weight. She had been habitually constipated. There had been no attacks of diarrhea.

The general physical examination showed little except the general evidence of anemia. There was a definite chronic infection of the tonsils, and a chronic right maxillary sinusitis.

The blood examination on admission showed: red blood cells, 1,830,000, hemoglobin 48 per cent, color index, 1.41, volume index, 1.58, white blood cells, 6,600, stained film, poikilocytosis, and anisocytosis without nucleated cells. The gastric analysis showed no free hydrochloric acid, with a total acidity of 8 acidity per cent. The urine was negative.

With rest in bed, forced feeding, and dilute hydrochloric acid she began to improve. During her stay in the hospital four transfusions of 500 cc, each were done. On discharge five weeks later the blood examination showed: red blood cells, 3,450,000, hemoglobin 79 per cent, and white blood cells 4000. One month later Dr. Sam Roberts removed the tonsils and cleaned out the right maxillary sinus.

She was seen at intervals of six or eight

weeks. With hydrochloric acid, Fowler's solution, and regulation of the diet, her condition remained satisfactory for a number of months. The highest red count during this period was 3,264,000, and hemoglobin 78 per cent. In March, 1926, her count began to fall and her symptoms to return in spite of treatment.

On October 5th, 1926 she was again admitted to the hospital with a red count of 1,056,000, hemoglobin of 50 per cent and a white count of 6,500. At this time the diet of Minot and Murphy was begun. Her treatment otherwise was the same she had had for the previous 18 months. She showed a rapid improvement as indicated in the following blood count.

	Red blood count	Hemoglobin %	Packed cells %
Oct. 5, 1926	1,056,000	47	50
Oct. 15, 1926	2,064,000	62	65
Oct. 23, 1926	3,096,000	73	75
Oct. 30, 1926	3,200,000	74	77
Nov. 11, 1926	4,024,000	91	96

She has kept up the diet and her blood count when last seen was still high. She had a more rapid improvement and better remission with this diet, than with the other method of treatment. It seems reasonable to suppose that diet was responsible for the rapid improvement.

This patient illustrates well the general principles of management of pernicious anemia. In an active stage rest in bed is the most important factor. Hydrochloric acid should be given in large doses. I begin with ten drops of the dilute solution and increased rapidly up to 90 drops, three times a day, with the meals. Arsenic in some form might be given although I am inclined to believe that the value of arsenic in pernicious anemia has been much overestimated. The bowels should be kept freely moving. Infection such as this patient presented should be removed. This is done because the infection is an added load for the patient to carry, not because it is the etiologic factor. Transfusions are of value when properly used with extreme anemia. A transfusion may be life saving in tiding a patient over until a remission begins. When a remission is already under way transfusions often hasten the improvement and shorten the stay in the hospital. The results from transfusion when the patient is on the downgrade are very disappointing. The most hopeful addition to the treatment of pernicious anemia is the diet introduced by Minot and Murphy. Only time will tell what its ultimate value will be.

TABLE 1

FOODS FOR PATIENTS WITH PERNICIOUS ANEMIA

Mammalian Liver Essential: About 200 grams (cooked weight) daily.

1 Encourage (in order of importance)—Mammalian liver, calves, beef, pig from 90 to 240 gms. daily.
Permit—one egg, milk (240 gms.) tea ad lib., coffee ad lib.
Avoid fats not to exceed 70 gms. per day, butter.

2 Encourage kidneys.
Permit—Cocoa shells ad lib.
Avoid—Cream, cheese.

3 Encourage chicken livers.
Permit—Potatoes.
Avoid—Fat of meats, bacon.

4 Encourage red muscle meat (trimmed of fat)
(a) Beef.
(b) Lamb mutton. .
(c) Calves' heart, beef heart.
Permit — Macaroni, cereals, toasted whole wheat bread, simple crackers.
Avoid—Pork, oils, cotton seed oil, olive in dressings, etc.

5 Encourage fruits (fresh, canned or dried)
(a) Peaches.
(b) Apricots.
(c) Oranges.
(d) Strawberries.
(e) Grapefruit.
(f) Pineapple. .
(g) Blueberries..
(h) Raisins (steam until soft before serving).
(i) Prunes.
(j) Other fresh fruit. About 400 gms. per day.
Permit—Sugar not to exceed 20 gms., per day, pickles, relishes, salt and vinegar, poultry, fish, shell fish.
Avoid—Nuts.

6 Encourage Vegetables (cooked or raw).
(a) Lettuce.
(b) Spinach.
(c) Asparagus.
(d) Cabbage.
(e) Tomatoes.
(f) Other vegetables containing from 1 to 10 per cent of carbohydrate.

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Obesity

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Obesity is a *symptom.* Because it is associated with a variety of conditions, the obese patient needs careful study before any attempt at reduction is begun. Otherwise, a body already suffering from lack of proper nourishment may be injured by dieting or a diseased heart injured by exercise.

The classification of obesity as exogenous or from food ingested and endogenous or from endocrine disturbances is not necessary because all fatty tissue is built up from material that originally entered the alimentary tract[1] [2].

With intelligent treatment as an objective, four classes of obese patients are recognized: [3] [4]. Obesity that is *inherited,* obesity that occurs with *endocrine disturbances* obesity associated with *cardiorenovascular* disease, and obesity that is directly *dependent upon foods ingested.* These types often overlap. A pure type is exceptional. For example obesity appearing at the menopause may be an herditary trait, and there develop simultaneously an increased appetite and myocardial degeneration. Usually, however, a predominating feature places each case in one or the other class, and this is helpful in treatment.

Hereditary obesity may be decreased slightly by diet and exercise, but actual benefit thus derived is doubtful. Inherited obeseness is as normal for certain individuals as is inherited stature. Turkish people and some African tribes are normally obese. . In securing a history searching for hereditary factors, not only must parents and grandparents be taken into consideration but also aunts, uncles, brothers, sisters and great grandparents because the Mendelian law holds good here as elsewhere and subdominant characters may be suppressed through several generations.

Fat is deposited *generally* or *locally.* It may be chiefly at the girdle, the neck, legs, or breasts. Inherited obeseness may appear only at a certain age. In some families, the babies are large at birth but grow into small individuals. Girdle obesity at the age of fifty is often a family trait.

The endocrine type of obesity may be inherited, but there are also individual cases[5] such as the eunuch, cretin, or subject of Froelich's disease. Obeseness often appears at certain periods of endocrine adjustment, at puberty and at the menopause, at marriage[6] and with pregnancy. Obesity frequently developes after ovariectomy.

The local fat deposits dfinitely associated with endocrine gland changes have been named according to clinical and pathological findings. There are adiposis dolorosa, adiposis tuberosa simplex, symetrical adenolipomatosis, adipositas cerebralis, adipositas pinealis, nodular circumscribed symetrical multiple lipomatosis, lipodystrophia progressiva[7] and adiposis secondary to neuropathic edema[8]. In cases of true Dercum's disease, definite anatomic changes have been found in the thyroid, pituitary and sex glands[9].

Cases of thyroid deficiency respond notably well to thyroid medication. In ovarian deficiency, extracts of the sex glands given hypodermically or by mouth occasionally lead to improvement. I have never seen obeseness of the pituitary type described by Engelbach[10] reduced by hypophyseal medication in any form. [11] [12] [13] It has been pointed out that in many cases of so-called pituitary obesity there is no anatomical alteration of the hypophysis, but changes in the adjacent brain tissue have frequently occurred[14] [15]. I believe that the favorable reductions described in so-called pituitary obesity were due not to the hypophysis administered, but to other constituents of the mixed glandular material, especially thyroid.

In obeseness of long duration, regardless of type, there are associated heart, kidney, blood and vessel changes. It is difficult to determine whether the obeseness causes vascular change or the vascular alterations determine the obesity—or whether both are dependent upon a third factor. But the intimate association of obeseness with heart, kidney and vessel disease is well known.

The metabolic disturbances, diabetes, uremia and gout[16] [17] [18] obscure conditions reluctantly considered disease entities, and notoriously associated with heart, kidney and vascular changes, are frequently accompanied by obeseness. Such conditions should be sought before a cure for the symptom obesity is outlined. Diabetes with its dirth of characteristic objective symptoms, or incipient retention of nitrogenous elements may be easily overlooked when the obese patient is examined. The fat diabetic

requires different management from the fat nephritic[19].

Having determined in a given case that the symptom obeseness is associated with diabetes, further search for the basic cause is indicated. It may be syphilis. Where in another case obeseness, vascular change and hypertension are present, the prime etiologic factor may be lead or some other poison.

Obeseness occurs with chronic anemia. Scrupulous search may place the anemic condition in the secondary instead of the primary group.

Obesity due chiefly to feeding conditions constitutes the smallest group, yet the chief treatmens for all cases is usually limitation of diet[20] [21]. However, many obese individuals not only remain fat but actually gain weight on a diet scientifically calculated to be less than the minimum basal requirement. They starve, grow weak, and gain weight. On the other hand, certain slender individuals when stuffed full of food weigh less than when fed only a little above the basal requirment. Superalimentation does not necessarily lead to supernutrition[22]. This is recognized by many men in the treatment of tuberculosis.

In a few instances, dietetic indiscretions lead to obesity. The artirficially fed infant is often pudgy fat. Obeseness may follow years of beer drinking. An obese condition associated with anemia in young people is improved by the addition of iron to the diet. Obeseness has been described associated with chronic constipation reduced by a nonconstipating diet.

SUMMARY

Since obesity is a symptom, the underlying cause should be sought before treatment is undertaken. The treatment of four arbitrarily chosen groups of obese cases is dicussed.

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Perverted Physiology as a Factor in Surgical Diseases of the Biliary Tract.

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Biologically, the liver is the second oldest organ in the body, the gut tract being the oldest, and the liver formed from the first off-budding from the foregut. It is the largest organ in the body, weighing approximately fifty ounces in the adult male. It is within itself a complete biochemic laboratory, situated between the portal and systemic circulation. It is both an organ of secretion and excretion.

Hess has attempted to ascribe to certain sections of the liver certain specific functions. Silvestri, likewise, has attempted to localize within the liver certain specific functions. He called attention to the fact that in Banti's disease, which is primarily a splenic affair, that it is the left lobe of the liver that enlarges; while in diabetes, which is pancreatic in origin, it is the right that shows most marked changes.

It is interesting to note that all of the digestive enzymes are secreted by off-buddings from the foregut; that is, that the entire function of digestion is controlled by the foregut, while the midgut forms the area from which absorption takes place.

The liver has an unusual vascular supply, an arrangement of afferent and efferent

blood vessels that is found in no other organ of the body. While other organs do their work in the presence of oxygenated blood, the liver works with and in the presence of blood that is entirely of a venous type. If one compares the volume of blood entering the liver from the portal circulation with the relatively small amount that enters from the hepatic artery, one is impressed with the insignificance of the role played by arterial blood. In fact, some anatomists insist that the branches of the hepatic artery do not reach to the liver cells proper, but merely supply the supporting structures of the liver and its blood vessels.

The liver has, also, an unusual cellular arrangement or cellular architecture. The individual cells are of the simplest form of cell life found in the body. They are incapable of work hypertrophy, but possess to a superlative degree the power of regeneration.

Mann removed seventy per cent of the liver in a dog and demonstrated that in a comparatively short time the remaining thirty per cent regenerated to such an extent that the dog's liver was soon of its original size.

Rous and McMaster ligated ninety per cent of the bile ducts without jaundice occurring. The ligated portions of the liver underwent atrophy with marked and rapid contraction; while the remaining ten per cent regenerated to such an extent that the functional part of the liver was within three months equal in volume to the original liver. The cellular reaction to injury or insult is death, with replacement by fibrous tissue. While the remaining cells rapidly reproduce new ones to take the place of the destroyed liver cells, yet the destruction is marked in each instance by an increase in the amount of connective tissue.

The function of the liver is both secretory and excretory, and while our physiologists are not yet certain as to the details of the functions of the liver, there are certain functions, however, that may be safely predicted.

The liver is the great reservoir for converted sugar in the form of glycogen. Closely allied with the glycogen function of the liver, there is an undoubted reciprocal relationship with the pancreas. The liver, likewise, is active in the metabolism of proteins and the catabolism of purins; it aids in the maintenance of the ammonia balance; it has to do with the production of urea. Another function that ranges high, possibly first, is the diaminization of the amino acids; it has to do with the storage and liberation of fats; the clotting of the blood is in some way controlled or influenced by the liver. Then again, there is the more obvious function of the liver; that is, the secretion and excretion of the bile. It possesses a marked detoxifying power whereby noxious by-products from the gastro-intestinal tract or from bacteria are rendered inert or harmless.

The question naturally arises: By what mechanism is the liver injured? This is accomplished, not only by the injurious by-products from the intestinal tract, but by both bacteria and toxins arising from the death and breaking up of the bacteria, which are being brought to the liver; both by the portal circulation and by the abdominal lymphatics. The live bacteria may produce capillary infarcts, resulting in the destruction of the life of the bacteria. The liberated toxins permeate well beyond the walls of the capillaries. The effect is death of the liver cell with replacemet by fibrous tissue, and as one views the increase in fibrous tissue in the liver we see constantly associated with gall bladder disease, one is impressed with the fact that this fibrous tissue represents the summation of millions of minor insults to which this liver has been subjected day after day and year after year for a long period of time; and that, likewise, the infected gall bladder is an expression of a pathological process much more wide spread than is apparent in the gall bladder itself.

These insults in the form of bacteria or bacterial toxins have several routes of entrance into the liver: The arterial system, which may bring infectious products from distant portions of the body is probably of minor importance; direct extension from infected contiguous organs; and possible ascension through the bile ducts are, likewise, of infrequent occurrence. We are impressed that the two chief routes of insult are through the avenue of the abdominal lymphatics or the portal circulation.

The effect of abdominal infections upon the liver has been emphasized by Graham, he declaring that there is no such thing as gall bladder disease without hepatitis and cholangitis. He even suggests the possibility that hepatitis may be the primary lesion; that the infection of the gall bladder is secondary, and accomplished by means of extension from the liver through the lymphatics.

Heyd removed sections of the liver for

purposes of study in the cases of operations done for the removal of the appendix, carcinoma of the stomach, etc., as well as infected gall bladders; and he, likewise, agrees with Graham that any long continued abdominal infection is bound to record its effect upon the liver; and both Graham and Heyd have called attention to the fact that in the presence of an infected gall bladder, the increased amount of fibrous tissue in the liver is more marked adjacent to the gall bladder; in fact, the amount of fibrous tissue decreases as the distance increases from the gall bladder.

Physiological chemistry has demonstrated that the functions of the liver are manifold. It is only partially an excretory organ, its main function being concerned with syntheses and desyntheses for the blood. Probably the most important role played by the liver in the physical economy of the blood is the diaminization of the amino acids and the synthesis of urea. Many methods have been tried for the determining of the impaired physiological function of the diseased liver. Most of these have yielded indifferent results. The determining of non-protein nitrogen is of some value. Many show a definite increase in blood sugar, the blood sugar returning to normal after the removal of a diseased gall bladder; on the other hand, some show a hypoglycemia. Some have tried to gain information by determining the cholesterol content of the blood. This is, however, of questionable value. One fact has been established, and that is that an increased cholesterol content is constantly present in obstructive jaundice, regardless of the cause of the jaundice; likewise, the determination of fibrinogen has yielded little information of value; in fact, it seems probable that the amount and the character of the calcium is of more importance in determining clotting time than is fibrinogen in the jaundiced individual.

The carbon dioxide combining power is of definite importance. It finds its chief value in determining whether the patient is approaching an acidosis or alkalosis. In the presence of a definitely reduced liver function, the condition of alkalosis is one to be feared, and one ought never to use alkalies promiscuously in gall bladder disease, without first having determined the carbon dioxide combining power.

A consideration of the physiology and biochemistry leads one to a much broader view concerning symptomatology of gall bladder disease. This symptomatology must of necessity include metabolic and systemic disturbances that are directly due to impairment of liver functions. It leads to a recognition of the fact that there are in addition to the local symptoms, a group which can be termed remote symptoms, and a third group of symptoms, systemic in character.

The first group or the local symptoms are the one generally considered, and with which we are all familiar.

As examples of the second or remote group, we would suggest arthritis, nephritis, arterio-sclerosis, endocarditis, myocarditis, and even a group of symptoms simulating angina pectoris.

The systemic or general symptoms which can be explained by this broader conception of the physiology of the liver are an ill defined group, represented by asthenia, loss of weight, a perverted skin pigmentation, and a general instability of the patient.

The post operative complications, likewise, take on an increased significance when one considers the perverted physiology present in biliary tract infections.

Many of the post operative complications readily recognized in the past are clear cut, distinct, and possess within certain limits a chronological sequence.

In the first twenty-four hours, the complications are anatomical; such as hemorrhage, shock, embolism, etc. In the succeeding forty-eight to seventy-two hours, the element of infection may possibly come into play, with the production of peritonitis and still later abscess formation.

We desire especially to emphasize the importance of the work of Heyd, Moynihan, and others who have called attention to clinical states that supervene after operations upon the biliary tract. Although these clinical complications are comparatively rare, yet they are definite, and apparently within their group are rather characteristic in their symptomatology. For convenience of description, they may be classed into three more or less distinct groups:

In the first, the patients usually have had comparatively simple gall bladder operations. They are usually obese, with a history of chronic gall bladder disease extending over a long period of time. The preliminary study of their urine, blood, etc, has assured us as to the competency of the renal function. Following the operation, the recovery from the anesthetic is delayed. They early develop delirium, which finally passes into coma. Many have been in the habit of attributing this condition to the

development of a post operative acidosis. In making a complete study of these patients, both before and after operation, Dr. Killian was able to show that the carbon dioxide combining power of these patients was far in excess of the normal, and approached values of seventy to eighty, sometimes even ninety volumes per cent; and that the condition, chemically, is that of an alkalosis.

The second group is essentially different in its clinical manifestations and comes on at a slightly later time. Usually the patient has had a very severe type of biliary infection, usually a history of jaundice, or a previous gall bladder operation. Their post operative progress has been satisfactory until the end of thirty-six to forty-eight hours, when they become irritable, and soon pass into a pronounced vaso-motor collapse. The condition may be associated with gastric dilation. There is usually ample renal function. The intravenous administration of glucose and saline has usually brought about a recovery. These cases do not exhibit the alkalinization of the preceding group, and their blood chemistry is only changed in so far as there is a change in the percentage of the rest nitrogen to urea nitrogen. These cases are regarded as due to the liberation of some pancreatic toxin with inadequate liver protection.

The third group presents a still more difficult phenomena. The patient has usually been progressing favorably up to the end of the fifth or sixth day. The preliminary studies have shown the blood chemistry, coagulation time; all, within the normal limits. Usually these patients have been jaundiced. At the end of the sixth to the tenth post operative day, with a constantly diminishing jaundice, these patients become sleepy, stuporous, and pass into a profound state of coma and die irrespective of any remedial agents employed. The clinical picture presented is essentially a coma occurring in a patient with a diminishing obstructive jaundice. In its manifestations, it is not unlike the terminal stage of a portal cirrhosis, with a complete liver exhaustion.

Heyd says, "We have long felt that these three clinical conditions were in some way connected with an impaired liver function; either a disturbed liver metabolism, a liver disfunction, or a liver insufficiency."

In the first type, the rapidity with which the development of coma is brought about takes it entirely out of the infectious class. The whole mechanism suggests a complete and rapid cessation of liver function.

The second type, which Moynihan has described under the caption "Pancreatic Asthenia," occurs too late for primary operative shock; and may be interpreted as being due to an inundation of the system with operative and infectious byproducts plus pancreatic enzymes, and direct poisoning of the liver cells with cessation of their function.

In the third group, it would seem probable that these patients have had sufficient liver function to maintain a certain degree of body wellfare and activity. When this is interrupted by a surgical operation, the liver is unable to withstand the additional load, and the interim between operation and death represents the period of increasing and progressive exhaustion of liver capacity.

It is our desire to emphasize the fact that, as one gazes upon an infected gall bladder, the condition of that gall bladder is an expression of pathological processes much more wide spread than is apparent in the gall bladder alone; and that as one notices the liver, each minute increase in fibrous tissue represents the reaction of that liver to an insult; that these insults have occurred in repeated showers over a period of years; that the rounded edge of the liver and the increase in connective tissue represent a summation of minute insults to the liver tissue, extending over a period of years; and what is more, it is evident that the incriminating bacteria gain their entry from various points and through various portals.

Let us urge a broader and more comprehensive study of these patients, with a full appreciation of the physiological and biochemic role of this most important organ, the liver.

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Diuretics

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The normal secretion of the urine is maintained by four factors:-the general blood pressure, the local blood pressure in the kidneys, the constitution of the blood and the specific secretory activity of the renal cells. These four factors are all constantly at work in the normal kidney and their activities are so closely interwoven that the normal passage of urine becomes a very highly complex process. In disease, when the patient excretes an insufficient amount of urine, we may find one or all or any combination

of the four at fault, and when we use diuretics in an attempt to promote a copious secretion of urine, we find the situation again exceedingly complex, since many diuretics produce their effect not because of one single action but because they influence simultaneously several of the factors that control the secretion of urine.

The rival theories of Ludwig and Heidenhain have now been the subject of physiological debate for more than sixty years. Ludwig, it will be recalled, saw in the secretion of urine a mechanical process produced by a filtration through the glomerulus, while Heidenhain, with perhaps a more sentimental regard for the kidney, saw in the secretion of urine a more vital process, a specific secretory activity of the kidney cells. Cushny, after a lapse of more than fifty years, reviewed the process in the light of his own extensive observations and of the enormous literature which had accumulated, and proposed the "modern theory" of urinary secretion. Cushny's theory in brief is, that the glomeruli of the kidneys act mainly as filters of urine, while the kidney tubules reabsorb certain substances in the urine and thus bring it to the proper concentration.

Cushny's theory, while reconciling to a certain extent the "mechanical" or filtration theory with the "vital" or secretory theory, stresses the importance of the mechanics of urinary production rather than the secretory function. In the study of those victims of insufficient urinary output who are in need of diuretics, we are usually impressed by the evidence of severe mechanical disturbances. Most of our patients develop edema because the circulation through the kidneys is at fault and the constitution of the blood is imperfect, or the filter itself has been destroyed.

One of the commonest causes of insufficient urinary output is cardiac disease. Cardiac insufficiency may be valvular in origin or may be the result of a long standing hypertension. In either event, the root of the trouble is myocardial and the myocardial insufficiency is so marked that the normal blood pressure, particularly the circulation through the kidneys, is not maintained. This condition indicates the use of a drug to increase the force of the heartbeat and to maintain the circulation through the kidneys.

Digitalis meets both of these indications. This most valuable of all cardiac drugs not only improves the tone of the heart muscle but also improves the circulation through the kidneys. Although in health, as Loewi and Ionescu have shown, it hastens the rate of the kidney circulation by producing a local vasodilatation of the renal vessels, there is no good evidence that this occurs with the dosage usually employed therapeutically. It is, as Eggleston states, primarily a cardiac diuretic. While digitalis may raise the blood pressure when it has fallen to a dangerously low level, the presence of high blood pressure is no contraindication to its use. Price showed in 1912 that digitalis produces no rise in the blood pressure of patients with hypertension, an observation which has been repeatedly confirmed. Vaquez has recently written that, "the fear of raising the arterial pressure by the administration of digitalis is illusory; the drug can be given without danger to hypertensive subjects as well as those whose pressure is normal or low."

A great many new preparations of digitalis have appeared on the market-most of them quite potent and effective, but, as Sir James Mackenzie remarks, "I have never found the tincture fail me, and it is this form which I have used most frequently, because it is the cheapest, and therefore in the reach of the poorest." The dosage of the tincture employed by Mackenzie was one dram per day given in three doses and continued until therapeutic or mild toxic effects are noted. Eggleston found that the full therapeutic effect of a standardized tincture was produced by 15 cc. (approximately 4 drams) per 100 lbs. of body weight. This method consists of giving one half this dose (2 drams) at one dose, following in six hours by one dram, and then smaller fractions every 4th to 6th hour until the total dosage or full response is reached.

Another valuable cardiac diuretic is strophanthin. This drug, Vaquez considers, "the heart medicine par excellence, the effects of which are exerted exclusively upon the myocardium and on the muscle fibers, whose tonicity increases without the intervention of other factors." Ouabain, one of the active principles of strophanthin, is perhaps the preparation of choice, since it can be crystalized and the dosage accurately standardized. The dose usually employed is 1/240 grain (one fourth milligram) repeated three or four times at intervals of twelve to twenty-four hours and injected intravenously.

In using strophanthin, we must not forget that it is very toxic. It was used for countless generations by the savages of Africa as an arrow poison before its therapeutic

value was recognized. It must be employed with great caution in patients who are taking digitalis.

Among the drugs usually classed as renal diuretics, the members of the caffeine series have attracted the most attention and have been the subject of most investigation. While the action of this group of diuretics was long explained on the theory of stimulation of the renal epithelium, the action is now considered to be mainly due to an improved circulation in the kidney produced by dilatation of the renal vessels. These effects, while especially marked in the kidney, also occur elsewhere and careful experiments have shown that hypodermic doses produce an increased systolic output and a definite increase of the total blood flow. No one who has systematically and persistently used such preparations as caffeine sodium benzoate in cardiac disease can doubt its effectiveness in increasing the tonicity of the heart, as well as in improving diuresis.

The member of the caffeine group of diuretics which is most generally used is diuretin or theobromine sodium salicylate. While this, with theocin or euphyllin appear to give good results in the treatment of edema, particularly of cardiac origin, the results obtained in patients suffering from acute or chronic nephritis have, in the main, been disappointing. The experimental work of Christian suggests that their use in acute nephritis may actually be harmful and, as Frothingham remarks in discussing the treatment of chronic nephritis, "it seems illogical to recommend drugs which have an effect upon the kidneys when all the remainder of the treatment consists in endeavoring to spare the kidneys from work." He adds that, "unfortunately, the various diuretics that work so well in cases of chronic passive congestion of the kidneys, such as preparations of caffeine or theocin, are usually of little benefit in chronic nephritis."

A very important group of diuretics are those that act by lessening the viscosity of the blood, thereby increasing its filtrability and raising the glomerular pressure. This very important mechanism is closely connected with the well known phenomenon of osmotic pressure, the role of which in diuresis has been especially studied since the work of Widal in 1903. Widal found that in edema the addition of a large amount of sodium chloride to the diet increased the edema, while a diet containing a very small amount of salt caused disappearance of the edema. From these results, Widal concluded that edema was caused by the retention of sodium chloride which, in time, led to a retention of water. This work led to the widespread use of the so-called salt-free—more properly salt-poor diets, which have been of such great value in the treatment of nephritic edema.

Water, which was praised so much by older clinicians as the greatest of all diuretics, acts by producing osmotic changes. Water, however, which has such a marked diuretic effect in health or in mild cases of nephritis, cannot be used in large quantities with patients having cardiac decompensation and is ineffectual in patients with any marked degree of kidney involvement.

Glucose, a member of this group, has a marked diuretic effect. A very striking illustration of its action is seen in diabetes mellitus where the patient usually voids large quantities of urine when he has a high blood sugar and large quantities of glucose in the urine. When, however, his blood sugar becomes normal and sugar disappears from the urine, diuresis ceases and his urinary output becomes normal.

In diabetes mellitus, the high sugar concentration of the blood draws water from the tissues and not only increases the urinary output, but may actually produce a dessication of the tissues. A similar series of events follows the introduction of a concentrated solution of glucose into the blood stream. This same principle is universally employed by neurological surgeons who reduce edema of the brain by the intravenous injections of concentrated glucose solutions.

We have had several gratifying results in acute nephritis with the intravenous use of glucose and have also found it effective in certain cases of chronic nephritis. We have usually employed 300 to 500 cc. of a 25% solution injected intravenously at intervals of three to four hours. Occasionally a patient has a chill and an elevation of temperature after the injection but such complications have been unusual and have not apparently been followed by any ill effects.

The saline diuretics apparently act in a manner similar to glucose, although their exact mechanism may differ somewhat. Schultz in 1917, while treating cases of war nephritis with the German army, found that calcium chloride produced striking diuresis in many resistant cases of edema. At the Mayo Clinic, Keith substituted ammonium chloride for calcium chloride and reported many striking results, some patients losing 70 pounds of fluid in five to six

weeks. Keith used ammonium chloride by mouth in doses from 200 to 400 grams over a period of two to four weeks. Our practice has been to give patients from 100 to 150 grains per day for a week or two.

One of the newer diuretics which has attracted much attention is novasurol or "merbaphen" as it is called in this country. Merbaphen is an organic mercury preparation first prepared for the treatment of syphilis and later, accidentally, found to have marked diuretic properties. The mode of action is still a bit uncertain, but it apparently consists in drawing both salt and water out of the tissues and into the blood, with a resultant polyuria.

This diuretic usually begins to act in three or four hours and the results are often striking. We recently had under observation a patient with nephritis whose urinary output was only 300 cc. per day. Following one subcutaneous injection of 1 cc. of merbaphen the urinary output was increased to 5000 cc. in a day. Merbaphen, however, should be employed with caution. The initial dose should be only 0.5 cc. and larger doses should not be employed oftener than once in four or five days. We have occasionally seen a watery diarrhea with blood and mucus in the stools following its use, but have not observed any serious complications.

Keith has employed a combination of ammonium chloride and merbaphen and has reported good results in many patients,—a finding which we can confirm. Both of these drugs used in combination are oftener much more effective than either employed alone.

The action of diuretics can often be assisted by other therapuetic measures. Saline cathartics are useful in promoting watery evacuations which diminish the total fluid content of the body and thus lessen the load which is thrown upon the kidneys. Another accessory form of treatment which is often of great value is incision or multiple superficial punctures of an edematous extremity. The amount of fluid which drains from an edematous leg following small superficial incisions or punctures is often very striking. Recently we studied the amount of fluid lost from an edematous pair of legs following multiple punctures with a hypodermic needle and found each leg to drain 250 cc. of fluid per hour. Such incisions or punctures should be made under aseptic conditions and care must be taken to prevent infection.

In the use of diuretics, the same principles must be observed as in all therapeutic measures. The cause of the edema should be first carefully studied and the appropriate diuretic employed.

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Meckel's Diverticulum

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Diverticuli, as applied to the digestive tract, are non-neoplastic outpouchings of the walls of the digestive tract having a lumen which may or may not connect with the lumen of the part from which they arise. They may be single or multiple and may be found in any part of the tract from the esopahgus to and including the rectum.

They are classified as true and false. Those having all of the coats of the organ from which they arise are true while those in which one or usually two of the coats are absent are false. They are also classified as congenital and acquired and even though Erdmann[1] and a few others believe that diverticuli of the colon are congenital, generally speaking the term congenital diverticulum refers to Meckel's diverticulum.

Meckel's diverticulum is said to be present in from one to two per cent of all individuals but lesions produced by it are found so infrequently in the course of any one medical man's practice that unless attention is occasionally called to it the average physician may not think of it when it is the offending part. Furthermore its symptoms are frequently so abrupt and so serious that it becomes an emergency case and immediate action must be taken and there is little time for investigations. The treatment of its lesions is always surgical, often radical and urgent major surgery. With the exception of umbilical fistulae, the conditions arising from it are never positively diagnosed and frequently not even suspected, even by the astute, until the abdomen has been opened. How often an acute abdomen is operated and the patient dies as a result of some condition arising from Meckel's diverticulum without the true cause ever being known I do not know. I must confess that I recall a case in my early practice where an aged woman died of an intestinal obstruction and a band running over the ascending colon was found at autopsy, that I now believe was a Meckel's diverticulum but at that time was not recognized.

For the above reasons and especially since some of the lesions have recently been de-

scribed and may not be generally known, a review of the subject and a report of a recent case will not be amiss.

History: Freidrich Christopher[2] says it was first observed by Lavater in 1671 and next by Ruysch in 1701, but was accurately described by John Friedrich Meckel, whose name it bears in 1812. His father was a distinguished professor of anatomy and surgery and his grandfather was the one who described Meckel's ganglion.

Development: "In the beginning of foetal life the mid gut is connected to the yolk sac by a wide canal called the vitteline duct. This duct is accompanied by an artery and two veins which maintains the circulation between the yolk sac and the intestines. At the end of a few weeks (about the 8th week) the duct becomes functionless and under normal conditions disappears; the atrophy beginning at the distal end. The vessels at the same time disappear except the portion in the messentery which persists and eventually forms the superior messenteric artery and vein. In about two per cent atrophy is not complete and varying portions of the duct remain and it is this remnant of foetal life which is known as Meckel's diverticulum." (Wellington)[3].

If the duct persists thruout there remains a fistulous tract extending from the small intestine to the umbilicus which may discharge mucus or even intestinal contents.

If the distal end of the duct atrophies and the vessels, although functionless, persist a band extending from the diverticulum to the umbilicus remains. At times the distal end only of the vessels becomes obliterated and leaves a cord extending from the diverticulum. This cord may become attached to any portion of the aodominal wall or its contents and it is these bands that so frequently cause intestinal obstruction and volvulus.

Meckel's diverticuli vary in size from mere projections to eight or ten inches or more. Rollester reported one 36 inches in length and Moll (4) one 33½ inches long.

Its walls are the same as those of the intestine from which it arises and may contain Lieberkuhn's glands and Peyers patches. Recently a number of writers have reported cases in which the distal mucosa was of the gastric type having acid secreting glands while the proximal mucosa was of the intestinal type having alkaline secreting glands.

Its lumen is usually the same size as that of the attached gut but occasionally the outlet is narrow or may have a valve action or be entirely closed. In this last case the secretions from its mucus lining accumulate and produces a cyst. McGlannon[5] reports an irregular flattened cyst of the diverticulum, 15 inches in its longest diameter and 8 inches in its shortest diameter, whose walls had become sarcomatous.

Its attachment to the gut is usually opposite that of the messentery but at times it is said to be at right angles to or even in the folds of the messentery. Occasionally it has a messentery of its own.

Its shape is generally that of a tubular pouch but it may be spherical or irregular.

It is usually located within 8 or 10 inches of the ileocecal valve in infants and within 3 feet in adults but it may be anywhere along the ileum or jejunum and hence may be found anywhere in the abdominal cavity.

Frequency: It is generally stated to be found in from 1 to 2 per cent of all individuals but most reports I have seen show that it is found much less frequently.

Christopher quotes Doefner's and Tellings statistics as follows:

	Autopies	With Meckels	
Doefner's—			
At Zurich	1822	14	
By English and French	4848	90	
Total	6670	104	1.5%
Telling's—			
Dresden City	8133	8	
Johns Hopkins	2600	15	
Boston City	1382	11	
Bender Hygienic Lab.	953	5	
Total	13068	39	.3%

Balfour in 10600 consecutive laparotomies only found 15 Meckel's diverticulum (.14%) and of these in only 5 was it the cause for the operation.

McGlannon[5] only observed 3 cases in more than 14,000 intra-peritoneal operations and says that Coley and Fortunne say in 18,000 autopsies only 15 Meckel's diverticuli were found.

Conditions which may arise as a result of Meckel's diverticulum are:

1—Intestinal obstruction including volvulus and intussusception.
2—Tumors.
3—Umbilical fistula.
4—Contents of a hernia.
5—Diverticulitis.
6—Intestinal hemorrhage.

The first four of these I will discuss very briefly.

Intestinal Obstruction: It may readily be seen that the bands described above may easily produce an obstruction. If the distal end of the band is attached to the umbilicus the gut may through its peristaltic action loop around it somewhat like clothes on a clothes line in a hard wind. If the distal end of the band becomes attached to other portions of the abdominal wall or to other organs or the messentery the gut may also become twisted over it or the band may contract down over the gut producing an obstruction. Volvulus may occur as a result of the twisting of the intestine around the fixed point made by the band. Intussusception results in these cases where the distal end of the diverticulum is not attached and its mouth is large permitting the diverticulum to be inverted into the intestinal canal and then pulling a portion of the intestine along with it.

Halstead reported by J. R. Wellington[3] estimates that 6 per cent of all cases of obstruction are due to Meckel's diverticulum.

Umbilical Fistula: If no atrophy of the omphalomessenteric duct occurs there remains an open tube from the ileum to and through the umbilicus and when the cord is tied the opening does not heal and a fistula persists discharging either mucus or intestinal contents or both. Occasionally the intestines are herniated through the duct and are ligated along with the cord and the infant dies of intestinal obstruction.

Contents of a Hernia: Where no atrophy of the omphalomessenteric duct occurs and the clefts of the abdomen do not close tightly one can readily understand that an umbilical hernia may easily contain a Meckel's diverticulum and it is found there more frequently than in any other hernia, but on account of its variability in position in the abdomen and in size it is also easily seen that it may be contained in the sac of any abdominal hernia either alone or with omentum and intestines. As early as 1770, forty two years before Meckel described it, Littre observed a Meckel's diverticulum in a hernial sac.

Tumors: The formation of a tumor from Meckel's diverticulum results in 4 ways, viz:

1—If its mouth is large foreign bodies may enter.

2—If the mouth has a valve like action intestinal contents may enter but not leave the diverticulum.

3—If its mouth is closed the secretions of the mucous membrane may be retained.

4—As a result of inflammation alone or in conjunction with any of the other causes, it may become adherent to omentum or bowels and an inflammatory mass arise.

Diverticulitis: During peristalsis the contents of the bowels are moved forward and backward and if there be a rent in the wall of the intestine some of its contents will sooner or later be forced through the opening. This is practically what we have in diverticulitis: The diverticulum becomes filled with intestinal contents or perhaps foreign bodies that have been swallowed and an inflammation results in the same manner that Mr. David Wilkie explains the cause of appendicits. If the inflammation is mild there may be a few cramps which soon pass over. If more severe the pains will be accompanied by vomiting, fever, rigidity, tenderness and leucocytosis. If very severe gangrene and perhaps perforation results with peritonitis and all of the symptoms of a fulminating appendicitis. Indeed the symptoms are so like those of appendicitis that probably every case of diverticulitis has been diagnosed appendicitis.

Several writers have tried to give a differential diagnosis of the two conditions and while a diverticulitis may be suspected on account of the point of tenderness and rigidity being superior and medial to McBurney's point a positive diagnosis is impossible.

Fronticelli[11] in an article, June, 1926, entitled "Acute Diverticulitis" says that only about 80 cases have been reported.

Intestinal hemorrhage: As stated before, the distal mucosa may contain alkaline glands and at the junction of the two ulcerations may occur and produce hemorrhages. Like other peptic ulcers the hemorrhage may be severe or mild and there is usually a history of repeated attacks.

Some 18 or 20 of these cases have been reported mostly by continental writers. In 1924 L. Guibal[6] in a report of a case of peptic ulcer of Meckel's diverticulum causing profuse intestnal hemorrhages said "very few of these cases, only 5 or 6, have been reported and the greater number of them have perforated." He says the first case was reported in 1913 by Hubschman. The history of his own case was a boy 14 years old who had intestinal hemorrhages in July, 1923, lasting a month. In January, 1924, hemorrhage recurred. Resection of intestine with Meckel's diverticulum, the ulcer having perforated. The mucosa above the ulcer was of the gastric type while that below it was of the intestinal type and the

ulcer was situated at the junction of the two types.

The history is a representative history in these cases except most of them occur at an earlier age. Guibal also cites the cases of Graman in 1915. Mulengracht in 1918, Muller in 1919, Meyevand and Duvant in 1922 and Hollopeau and Humbert in 1924.

Stulz and Worringer[8] report two cases of their own and eleven in the literature, ages 5 months to 15 years, all boys. 10 of the 13 perforated, 7 died from perforation with peritonitis, 1 died of anemia with localized peritonitis and 5 were saved.

In this country Abt and Strauss[7], Chicago, have been the most prolific writers on this type of cases. They report 3 cases, a girl 2 years and 2 boys each 11 months old.

Reginald Jackson[9] Madison, Wis., in 1924 reported a boy 10 years old with history of repeated hemorrhages and cramps in left mid-abdominal region for years. Exploratory operation with resection of Meckel's diverticulum and recovery, but no report of pathological or histological findings.

W. J. Mayo[10] in Oct., 1926, reports a boy, 15 years old with a history of repeated intestinal hemorrhages since he was 3 years old in whom an appendectomy had been made. He resected an inflammatory Meckel's diverticulum but gives no report of the histology of the mucosa.

Where no histological report has been made as in these last two cases, most writers seem to accept the conclusion where there has been hemorrhages that that is proof of gastric mucosa.

George Schaetz (Abt & Strauss)[7] shows that gastric epithelium was found at the tip of the diverticulum in 5 out of 30 cases (16.6%) that were examined.

Guibal[6] in his article "Peptic Ulcer of Meckel's Diverticulum Causing Profuse Hemorrhage" makes the following conclusions:

1 All ulcers bleed and give rise to abundant hemorrhages.

2 The greater number perforate.

3 They always occur in young individuals and most frequently in boys. The youngest 11 months and the oldest 28 years.

4 The presence of gastric mucosa was found in nearly all cases.

5 The ulcer forms at the junction of the gastic with the intestinal mucosa.

6 The origin of the gastric mucosa is unknown and there has been no satisfactory explanation of its presence.

7 Treatment is the radical cure of the diverticulum by early operation.

8 The ulcer appears to be the result of contact of the gastric juice with the intestinal mucosa.

In the differential diagnosis of intestinal bleeding in children Abt & Strauss[7] say when an infant bleeds from the bowel intussusception is the condition first thought of, consequently a bleeding Meckel's diverticulum must be differentiated from this condition. The initial sharp pain and colic, as well as the vomiting are marked in intussusception and usually absent in the bleeding diverticulum. In intussusception the blood is usually small in quantity and intimately mixed with mucus. In the bleeding Meckel's diverticulum the blood is abundant, not mixed with mucus. In some instances it may be bright red. Frequently it is black and tarry. If a tumor is felt, the diagnosis of intussusception may be presumed, although the symptom is not always elicited.

"Rectal polypi and dysentery also produce bloody stools but their differentiation should cause no difficulty.

"Bleeding duodenal ulcer which occurs in children is usually ruled out by the roentgen rays, which shows a defect in the duodenum characteristic of the condition.

"If bleeding persists and a presumptive diagnosis of a Meckel's diverticulum can be established exploratory laparotomy is indicated."

Results of conditions arising from Meckel's Diverticulum: Wellington[3], in a study of 326 cases where diverticulum was the cause of the trouble but not including cases where it was found at autopsy or in the course of operations for other causes and was not involved, found the following conditions:

144 intestinal obstruction, not including intussusception and volvulus, with a mortality of 49%.
59 intussusception with mortality 54½%.
50 acute diverticulitis (in 15 the exciting cause was foreign bodies) mortality 40%.
27 included in hernial sac.
21 in which the diverticulum was open.
9 volvulus, mortality 50% 8 operated.
6 perforation in typhoid fever mortality 100%.
2 perforations from trauma.
3 prolapse of bowel.
1 pelvic tumor.
1 cyst.

This report was made in 1913 and an

analysis of more recent cases might show some improvement in the mortality on account of better technique in operating and earlier diagnosis, but nevertheless the mortality still remains very high and when a Meckel's diverticulum is found in the course of another operation, it should always be removed unless the condition of the patient is such that it entails too great a risk to do so. Miles F. Porter long ago said that the presence of a Meckel's diverticulum was a far greater menace to its possessor than is the appendix.

Treatment: I will not discuss this except to say that the only treatment of a Meckel's diverticulum and its complications is radical surgery.

Case—Hospital No. 3313-1926.

A. E. age 10, school boy entered St. Margaret Hospital Nov., 11, 1926 complaining of pain in his right upper quadrant. His history in brief was that three days prior he had abdominal cramps while at school and was sent home. The pain continued but there was no vomiting except after taking castor oil which his mother gave him the first day.

Past History: Negative except similar cramps three weeks before which were not so severe or persistent.

Examination: Temperature 100, pulse 96, tenderness and rigidity over the right lower quadrant and blood examination Hg. 90, W. B. C. 24,500, Polys. 88, L. L. 2, S. L. 10. The urine was normal containing no blood and no pus cells, and aside from the findings stated the examination otherwise was essentially negative.

Preoperative Diagnosis: Acute appendicitis.

Operation: Patient was immediately sent to the operating room and under ether anaesthesia a right rectus incision was made. Before opening the peritoneum a moderate amount of thin creamy pus escaped. Exploration for the appendix revealed a mass the size of a child's fist was palpated, which proved to be a gangrenous perforated Mechel's diverticulum. The diverticulum was about four inches long and 1¼ inches in diameter. Its base was attached to the ileum at right angles to the mesentery while it layed on and appeared to be a part of the mesentery. One half inch distal to the base was a round perforation the size of a goose quill and the whole mass looked like a very large gangrenous appendix.

About five inches of the ileum with a V shaped excision of the mesentery including the diverticulum was resected and lateral anastomosis made. A wick drain was inserted into the pelvis and another to the point of the anastomosis. 600 cc. of salt solution was given subcutaneously on the table and the patient made an uneventful recovery and at this time is perfectly well.

Pathological report: Drs. Wahl and Helwig made close research for gastric glands in the mucosa but failed to find them which was as expected as these have never been reported except in cases that have had ulceration and intestinal hemorrhages.

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Chronic Colitis

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In the treatment of chronic gastro-intestinal disorders, so much attention has been given to organs within the reach of surgical

influence that certain other organs have not received the consideration they deserve.

The internist has been so occupied with the newer problems of physiology, chemistry and metabolism that it may be said he has to an extent neglected the possibilities of gastro intestinal therapy.

There has crept into our medical teaching a certain degree of medical therapeutic nihilism, an attitude of mind that would relegate, in the final analysis, most cases of chronic dyspepsia or indigestion to surgery.

The skill and keenness of our surgeons coupled with the divided attention of our internists is largely responsible for this attitude. None will deny the good results obtained by the removal of a diseased gall bladder or appendix, but to adopt an attitude that practically all chronic gastro-intestinal complaints are caused by these organs is not conducive to better therapy.

Entirely too much attention has been given the gall bladder and appendix and too little to the colon as a cause of chronic gastro-intestinal symptoms.

For many years we believed in the existence of chronic appendicitis but happily most of the profession have come to the conclusion that there is no such thing as a chronic inflammation of the appendix which acts continuously and persistently over a period of months or years producing various forms of indigestion.

Yet many operations are still performed, apparently normal appendices removed, and paradoxically the patient is often freed from complaints following the operation.

It is recognized that a recurrent acute inflammation of the appendix occurs, the patient during each attack presenting the classical symptoms of an acute or sub-acute appendicitis but usually remaining symptom free in the intervals between attacks. This is not the type of case I refer to. I refer to the patient who has never had an attack of acute appendicitis but who has a chronic indigestion with a long history of pain in the abdomen often confined to the right side. None of the symptoms, such as fever, vomiting, right rectus rigidity or increased neutrophile count are present.

What then is the answer to the apparent enigma, a patient who has no disease of the appendix, yet is cured by an operation for its removal? For many years I studied this question. During the time my work was confined to x-ray I had an opportunity to study many patients with tender right sides, possibly with a segmentally filling appendix or one which retained the barium for many days. I observed them before and after operation. Many of them were apparently entirely cured by the operation but all too often the symptoms recurred after a period from three months to a year and the patient would again seek information why the abdominal symptoms persisted.

The old story—adhesions—is all too familiar. I would not attempt to estimate the number of people sent to our laboratory in an effort to locate adhesions in the caecal region as a cause of the renewed symptoms. The same is true of the gall bladder. Think of the number of individuals operated upon on meager histories and physical findings, indirect or indefinite x-ray findings. The gall bladder is found at operation apparently normal ,no adhesions, no thickening of the wall, no shrinking or distortion. The operative sheet usually states that the bile is very dark in color, very thick, quite tarry, or what not. The patient recovers from the operation, thanks to the good operative technique, and very often cured of his dyspepsia.

Here again, all too frequently, he returns after a varying period with a recurrence of his symptoms. He is again sent to the roentgenologist for a demonstration of upper abdominal adhesions. The next chapter may be an operation for the removal of the gall bladder and again the patient has a period of remission from symptoms, only to return later on. The next chapter may be one in which the genito-urinary specialist is consulted and a loose kidney or a kinked or strictured ureter diagnosed as the cause of the symptoms.

He may now try one of the cults in his frantic efforts to relieve his dyspepsia. He may become resignd to his fate and remain a chronic dyspeptic to the end of his days.

This picture is not overdrawn, I have seen it many, many times. I have in my records a large number of such histories, some even more prolonged and complex.

What is the answer to the question then? Why do some patients remain well after these operations and some have recurrences? The answer, in my opinion, in the vast majority of instances, is that the enforced physiological rest and dietary restrictions incidental to the operation cures or temporarily relieves the chronic colitis which is so often the cause of the symptoms in the first place.

I am led to this belief because I have successfully treated many such patients

without operation. I have also treated an approximately equal number with recurrent dyspepsia after operation with the same good results. After observing the almost universal relief from symptoms when the patients are given treatment directed to the colon, I am today more firm in my belief than ever before. Physiological rest of the colon carried out for a much longer period than is usually enforced after operation seems to me to be the key to the successful treatment of the vast majority of the chronic dyspeptics.

I have observed that the surgeon who kept his patients in bed a long time after operation and restricted the diet for a number of weeks or months, has a much smaller percentage of failures than the spectacular surgeon who is proud of his record of never keeping a patient in bed more than a week or ten days. The latter type of surgeon often gives his patients no advice as to his diet, in fact is quite happy to simply say, "Get up, go about your business, eat anything you want. I have removed the cause of your dyspepsia by taking out your appendix." And paradoxically as it may seem he very often gets away with it, the patient is relieved of his symptoms and swears about the miracles of modern surgery.

All too often, however, the symptoms recur. The patient suffered from too severe a grade of colitis and soon lapses into the same old dyspeptic syndrome again.

Let us now consider this disease from the standpoint of etiology, symptomatology and treatment. In this discussion I wish to exclude chronic amebic or bacillary dysentery, ulcerative colitis, tuberculosis, syphilitic stricture of the rectum, chronic obstruction of the bowel, tumors of the colon, diverticulosis of the sigmoid and the various parasitic diseases. It is assumed that the history and examination will exclude them.

I would like to say at the outset that the condition is not confined to the visceroptotic individual. I do not believe that the position of the abdominal viscera has much to do with it. I grant that these people do suffer more acutely and complain more bitterly when they are affected with the disease but that I think is due to their disposition to complain more about everything. It is common knowledge that a visceroptotic may be put to bed and fattened up and be relieved of all symptoms but another x-ray examination will show the viscera in exactly the same place as before the treatment. Furthermore roentgenologists know that the worst case of visceroptosis, with the stomach in the pelvis and the transverse colon making a "U" shaped dip to the floor of the pelvis, the sigmoid very redundant, may have absolutely no constipation, no retention beyond the normal limits and no dyspepsia. I find fully as many fat people suffering from colitis as I do the thin visceroptotic ones.

The story of the complaint is nearly always the same, varying only with the temperament and story telling ability of the patient. First there is a long period of constipation. This may date back as far as the patient can remember or may date from some bed confining sickness at which time the physic habit was formed.

I have made a habit of inquiring who was responsible for the development of the physic habit and all too often the patient states that it was begun on the advice of some physician. It has always been a remarkable thing to me that so many physicians prescribe physics to move the bowels, yet I am convinced that it still is a very common practice.

I think it is a very pernicious thing to prescribe physics of any sort to any patient unless it is justifiable occasionally in an acute infectious or toxic disease where there is actual need of removing poisonous material from the gastro-intestinal tract. Even then I feel sure it is greatly overdone, the patient instead of deriving benefit from it is further weakened and recovers more slowly than otherwise would have been the case. Physics may also become necessary in cardio-vascular or cardio-renal disease or for the individual who is too old or feeble to adopt proper habits of hygiene.

The constipation remains a simple constipation for many years. By that I mean there is very little local or remote symptomatology other than the fact the bowels will not move unless some physic is taken and the patient is subject to what he calls bilious attacks. After a time the particular physic becomes ineffective and a different kind is used. The patient usually goes through the entire list of physics, laxatives, regulators, tonic laxatives, aperient waters, mineral waters, mineral oils, etc. It makes no difference what the drug is or by what fancy name the pharmaceutical house gives it, the effect is always the same, the patient is never cured and nearly always becomes worse.

All such drugging is contrary to physiological laws and there comes a time when the delicate autonomic nervous system rebels. When this time arrives, the case is

no longer one of simple constipation but becomes something additional. The patient then begins to have chronic dyspepsia, begins to notice that certain foods do not digest well, that after eating them there is an uneasiness or actual distress in the abdomen. This is the beginning of the abnormal irritability of the bowel. There may be no actual macroscopic imflammatory change in the mucous membrane of the bowel but the delicate plexuses of Aurbach and Meissner located in the walls of the intestines and particularly those in the colon begin to show the strain of the long continued insult.

The normal mass peristaltic action of the large bowel begins to change to a segmental affair and one can see spasms at various points, particularly in the descending colon and sigmoid. The stools become small in caliber and are often passed in small balls like sheep dung. Later there may be alternate periods of constipation and diarrhoea. During the diarhoeic stage the stools are often putty like and are flat or ribbon shaped. The patient says he feels good only when he is constipated. Frequent attacks of fermentation occur accompanied by the passing of copious light yellow stools which float on the water in the toilet and have a very vile penetrating odor.

The principal subjective symptom is bloating after meals. Whenever a patient states that the abdomen feels unusually tight or distended shortly after meals it may be taken almost without exception that there is something wrong with the colon.

The two divisions of the para-sympathetic nervous system which control the motor activities of the gastro-intestinal tract are connected together in the higher brain centers and the only kind of stimuli which they can receive and transmit are those similar in nature to their normal function. Every sensory nerve is specific according to the nature of its end organ. The optic nerve because of the nature of its end organ is sensitive to light, and carries only sensation of sight. The auditory nerve because of the nature of its end organ carries only sensation to sound. If the optic nerve is stimulated by a blow on the eye the result is not pain but subjective sight sensation.

The sensory nerves of the gut carry sensations of pressure or stretching because their function is to contract the musculature of the bowel which they do under normal circumstances without pain or discomfort.

When the stimulus is abnormally severe the patient may suffer pain. If the stimulus is only moderately increased there may be only a feeling of bloating or distension. A measurement of the abdomen at these times may show no actual bloating, the colon is simply contracted down to a smaller calibre upon a normal amount of gas giving the patient a sensation of actual distention.

Whenever food is taken into the stomach it gives rise to the so-called gastro-colic reflex. In the normal individual this causes a desire to move the bowels usually directly after breakfast as this is the time the stomach has been emptied the longest. There is no pain, no bloating, only a desire for an evacuation. After the evacuation is completed the individual feels comfortable; feels that the bowel is empty; there is a sense of well being; a sense of stimulation, which was not present before.

This is not the case when the colon is irritated. The feeling of distension appears shortly after meals and is not confined to the morning meal, but may appear after any or all of the meals. Even a drink of water may bring it on. There is no particular desire at first to move the bowels and the bloating continues until after there is actual pain. The pain is colicky in nature and finally culminates in a large copious movement beginning as a hard mass continuing as a putty like flat stool and terminating as a watery one. The longer the action continues the worse the cramps become until at the end of the act the individual is in a cold sweat, feels weak and exhausted and may be forced to lie down for a time before the pain subsides.

This is the picture of severe chronic colitis. Of course one seldom sees such a neglected case. The majority complain simply of distension or uncomfortable fullness. They feel better after the clothing is lossened around the waist. This feeling may pass off after a time with the passage of some gas without a movement of the bowels.

My surgical friends will immediately say "Why this is exactly what we rely upon for a diagnosis of chronic gall bladder disease, all these patients complain of bloating after meals. We ask about this particularly and seldom do we operate a patient in which this is not present."

This is unquestionably true, most gall bladder patients have this symptom but I do not think it is due to the gall bladder directly but to the accompanying colitis which is so often present in chronic gall bladder disease. I think that bloating shortly after meals is the one symptom

which can be relied upon to tell us that the colon is disturbed.

The fact that chronic gall bladder disease may be present in almost any patient, with or without abdominal symptoms, makes it necessary to rule it out in every case. Formerly it was necessary to rely almost entirely upon clinical reasoning to diagnose chronic gall bladder disease but thanks to the dye visualization test it is now possible to rule it out in most instances, not however with 100 per cent accuracy.

The pain in colitis may be general over the entire course of the colon or may be confined to a certain segment. A characteristic feature is that the pain is inclined to shift from one part to another, appearing first on one side then the other, again in the epigastrium.

It varies from a simple feeling of distension or fullness to the most acute agonizing colicy spasm. When it is confined to the epigastrium it can easily be confused with an acute gall bladder attack if the history and physical findings are not carefully considered.

The caecum is nearly always distended and tender. The descending colon and sigmoid can usually be palpated as a hard tender mass.

The constant tenderness over the caecum often leads to a diagnosis of appendicitis. It is a good working rule that a constant tenderness over the right side is not appendicitis. To my mind the proof of this is that it may be present before or after an appendectomy and disappears only after instituting treatment directed to the colon. There should be no difficulty in differentiating colitis from appendicitis if we grant that chronic appendicitis does not exist except as a rare complication of tuberculous colitis or some such chronic granulomatous infection. Appendicitis is an acute or subacute disease with the usual symptoms of appendicitis present.

The remarkable thing about recurrent appendicitis is that so often the patient is perfectly well between attacks, does not suffer from dyspepsia and does not have tenderness over the right iliac fossa unless some complication exists. An x-ray examination made during the intervals between attacks may disclose a fixed caecum or a fixed retro-caecal appendix which is not particularly tender.

Sufferers from chronic colitis will nearly always state that such foods as raw apples, boiled cabbage, coarse vegetables and raw fruits of various kinds aggravate the symptoms. They learn to avoid these things of their own accord. They state that if they eat only a little food at a time and that of a simple carbohydrate or proteid nature they are free from pain. They say they feel better when constipated but that they are afraid to remain constipated too long and resort to a large soap suds enema or a physic to empty the gut. Then they begin to have distress again and after a period of food denial become constipated and are forced to the dynamiting process again.

Often books on diets are purchased and the patient will read that regular bowel movements can be secured by the proper combination of fruits and vegetables. He is urged to eat a large number of coarse vegetables each day; drink plenty of water; take a lot of exercise in the open air; go to stool at regular times each day; in fact the usual routine for simple constipation. This only aggravates the symptoms. The time to apply such a regime is before complications arise. An anti-constipation diet should never be prescribed if the history or examination discloses any evidence of irritation of the bowels. Many of the failures in the treatment of chronic bowel complaints can be directly attributed to a disregard of this fundamental rule.

X-ray examination of the gastro-intestinal tract as a rule will not disclose any characteristic thing. Often the roentgenologist's clinical sense will tell him what the trouble is even though he sees nothing abnormal. Sometimes the descending colon will be very spastic, but this is not diagnostic. Spasticity is so often noted in individuals who have no abdominal distress and no constipation and must therefore be interpreted cautiously. As a matter of fact the roentgenologist will make his diagnosis on the absence of organic stomach or gall bladder disease and the presence of pain along the course of the colon.

The sigmoidoscopic examination is probably the most important single aid aside from the history. The typical case will present characteristic changes. I have arbitrarily classified the cases into three groups. 1st, those that show no changes in the mucosa of the lower segment of the bowel within the range of the thirty cm. tube. These cases may have changes higher up, possibly in the caecum. I have had no opportunity to check up on this and know of no literature on the question. The lower segment, however, is free from macroscopic mucous membrane changes. There nearly always is a marked spasm of the gut at the

recto sigmoid juncture and considerable pain with the passage of the tube through this area. The recto-sigmoid juncture seems to act as a sphincter and the sigmoid will contain isolated, small hard fecal masses. This type of case seems to me to be a simple increased irritability of the colon with resulting spasticity.

The second class shows the same condition at the recto-sigmoid juncture plus a slight change in the mucous membrane of the lower bowel. There is a definite congestion of the blood vessels, a slight reddening of the mucosa and that is all.

The third class, and the one so commonly found presents a very characteristic picture. The mucous membrane is fiery red, definitely granular and shows a tendency toward redundant folds. The bowel does not baloon out ahead of the sigmoidoscope, the patient complains of pain the very minute the instrument is inserted through the anal sphincter and the examination can rarely be carried higher than the recto-sigmoid juncture on account of the pain. The wall of the gut may be covered with small sticky fecal masses. The mucous membrane bleeds at the slightest touch but there are no erosions or ulcerations present. The anal canal may contain shallow fissures and small hemorrhoids and after the examination the patient feels that he has been through a real ordeal.

I have spoken a number of times about physiological rest of the colon as the particular therapeutic agent necessary to accomplish a cure. Just what is meant by that? If one has a sprained or bruised elbow the arm is put in a sling and after a few hours the injured nerve endings quiet down and the pain subsides. This principle applies to inflammation anywhere—rest and the inflammation subsides. Exactly the same principle is applied in treating colitis.

In acute colitis we limit the food intake to almost nothing, give opiates and bismuth, and the patient feels better very shortly. In the treatment of a chronic disease the same principle is utilized but not to such an extreme as in the acute disease. In a disease which may require months to cure one cannot limit the food intake below the maintenance level. Neither is it justifiable to give opiates over a long period of time. The treatment then must be such as will fulfill the requirements of a maintenance diet and still obtain the maximum amount of physiological rest for the colon.

An inquiry into the nature of foodstuffs discloses the fact that certain foods have a tendency to move the bowels, either by the bulk of their residue or by the amount of irritation and fermentation they produce. If such a diet can be prescribed that will fulfill the patient's food value needs and at the same time not produce fermentation, irritation or undue residue, the desired results are obtained.

Acting upon this line of reasoning we immediately single out the vegetables as the principal bulk producing food and also as one of the principal fermentation offenders. Fruits come under the ban on account of the fermentation they produce. Such irritating foods as pickles, olives, condiments, jams, jellies, candies, soda fountain drinks, pancakes, hot breads, pork, fried foods, very hot or cold foods, cider, buttermilk, strong coffee or tea, alcoholic liquors, rich pastries all come under the ban.

This leaves then a large list of easily digestible foods, with practically no residue and only a mild tendency toward fermentation or irritation. The list contains—

Soups—creamed, strained vegetable or bouillon.

Cereals—All cereals except bran foods. All should be well cooked.

Bread—Stale bread, toast, zwiebach and crackers.

Meats—All meats and poultry except pork (crisp bacon is allowed in moderation.)

Dairy products—Milk, cream, butter and simple cheese.

Eggs—Any way except fried or deviled.

Miscellaneous—Spagetti, macaroni, (no tomato sauce), rice, tapioca, noodles.

Desserts—Jello, custard, cornstarch, ice cream, ices, bread pudding, very simple cake.

Fruits—None except a little orange juice night and morning.

Vegetables—None.

This non-residue, non irritating diet will fulfill the proper food requirements, in fact, it is highly nutritious and patients often get fat on it. At the same time it is practically all absorbed before it reaches the colon and threfore the colon has very little to do and practically nothing to irritate it. . Such a diet is constipating and it is nearly always necessary to give a two or three ounce cotton seed oil enema at night which is retained until morning. This will insure a bowel movement the next morning if there is anything in the lower bowel to be removed.

It is sometimes necessary, if the bowels are very loose, to give a powder consisting of equal parts of calcium carbonate, cal-

cium phosphate and bismuth subnitrate in teaspoonful doses three or four times a day. Many times small doses of opium and belladonna are helpful at the start, the balladonna may well be continued for several weeks. It is often necessary to put the patient to bed and apply heat to the abdomen several hours a day, preferably with the electric pad. The weight of a hot water bottle is often very disagreeable to the patient.

Local treatment applied to the mucous membrane of the lower segment of the bowel is a very great aid and sometimes apparently essential. A very helpfull remedy is to insufflate through the sigmoidoscope daily a powder composed of equal parts of calomel and bismuth subnitrate. This is plastered all over the wall of the gut and it is surprising how quickly the inflammation subsides following its daily use.

Under this plan of treatment the patient will show improvement at once and the improvement will continue steadily from week to week. A mild case may need the strict diet only a few weeks to effect a complete cure. This to my mind accounts for the cures when a normal appendix is removed under the assumption that it is the cause of the trouble and also accounts for the failures if the inflammation is too severe.

A severe case may require several months before the dietary rstrictions can be removed. The criterion for increase in diet is a complete relief from pain and bloating or irritation of the bowel as determined by frequent sigmoidoscopic examinations.

When increases are made in the diet, one should begin with the simple vegetables such as spinach, string beans, mashed or baked potatoes, hearts of celery, peas etc. Stewed fruits such as apples, prunes, peaches, apricots, etc, may be added cautiously as the patient's tolerance permits.

At times it may be necessary to continue the restrictions on raw fruits and coarse vegetables for one or two years and the patient can usually be promised that in time a normal diet can be resumed, subject to modification if there is the least return of symptoms. The average patient who has suffered from dyspepsia for years will gladly submit to a reasonable restriction in diet after he has been shown that such restriction keep him comfortable.

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In the last number of the Illinois Medical Journal the Editor severly criticizes Dr. Arthur Dean Bevan for a statement he is reported to have made at the annual conference of the council on medical education and hospitals of the A. M. A. Newspapers quoted Dr. Bevan as saying:—"More than ninety-nine prescriptions out of a hundred written for a pint of whiskey are bootlegging prescriptions and are a disgrace to the great medical profession."

Men who have achieved greatness in the medical profession are too frequently regarded as infallible critics of medical thought and medical practices, by the profession as well as the laity. It is to be expected that they should overestimate the importance of their opinions and present such opinions as facts. The profession in Kansas cannot be included under Dr. Bevan's arraignment of the profession as bootleggers. That is, at least, one advantage in the bone dry law.

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Silver Compounds

Silver nitrate first demonstrated the bactericidal property of silver. This was, obviously, an invitation to the chemist to devise a silver compound that could be used freely in solution, as silver nitrate could not. Especially desired was a silver salt that would kill the gonococcus without irritating the urethra, for it was soon learned that silver was especially efficacious as a gonococcocide. The majority of silver compounds offered from time to time one of two objections is made by the patient: first, they hurt; second, they left dark stains on the linen.

Now comes a comparatively new silver iodide preparation—one that actually protects the silver and the iodine from the action of light, and yet leaves its activity as a germicide apparently unimpaired. Neo-Silvol, as this product is called, is said to be 20 times as active as pure carbolic acid (in other words, to have a phenol coefficient of 20) in contact with the gonococcus, and at the same time to be notably bland in its effect upon the inflamed tissues and free from the dark-staining tendency that characterize other silver preparations.

Further particulars are offered to the readers of the advertisement on Neo-Silvol which appears on another page of this issue.

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A copy of the "Preliminary Report of the Commission on Medical Education" will be sent to any one interested in the general qustions of medical education and practice. Address: Commission on Medical Education, 215 Whitney Avenue, New Haven, Connecticut.

THE JOURNAL
of The
Kansas Medical Society

W. E. McVEY. M.D. - - Editor

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THE MEDICAL SCHOOL

The recent legislature appropriated $300,000 for new buildings for the Medical School, marking an epoch in the development of this institution. This will provide for a nurses' home accommodating eighty nurses and for a model ward unit with a capacity of 120 beds. This appropriation is of more significance than the mere addition of two badly needed buildings. It means that the state has endorsed the present plant and has put itself on record as favoring the development of a modern medical school for Kansas. It shows that the state is alive to the importance of a properly supported medical school in safeguarding the health of its citizens. It indicates a more consistent adequate support of this institution in the future.

Another act of the same legislature promises a most important part in the future development of the Medical School. This was the provision which separated the budget of the plant in Kansas City from Lawrence without separating the two divisions, thereby insuring University control and supervision. This should make it easier for both the University and the Medical School to receive more adequate support from the legislature for both buildings and maintenance.

The Medical School owes much of these recent developmnts to the wholehearted support which it received from the medical profession of the state. It is only natural that it should, in its development, justify the faith and support that the physicians of the state have given it. This can best be accomplished by consulting the medical profession in developing its plans for the future, by explaining its policies, by inviting criticisms from over the state, and by welcoming suggestions on means of enhancing its service to the medical profession of the state by postgraduate instruction, diagnostic service, and so on.

The school is anxious to cooperate with the medical profession of the state especially with some perplexing and intimate problems that face it. Inasmuch as it is supported by all of the people of the state there are demands made upon it by laymen that cannot be ignored. These often involve the general practitioner's field and for this reason the cooperation of the profession at large is essential. This is illustrated in the increasing recognition of the right of the average wage earner to the best the medical profession has to offer at a cost that he is able to bear. The demand of society that each crippled child be given whatever medical science has to offer regardless of its financial backing has lead many well meaning but often misguided individuals to take forcible measures even against the advice of the doctors. This is often associated with a general apathy on the part of the medical profession so that ill-advised health legislation may be forced upon the physician. In some states there seems to be an increasing tendency for health measures to be under the supervision of lay individuals and entirely independent of the medical profession. This is a dangerous tendency and one that the School desires to counteract. It would encourage only such general health measures as are under direct supervision of the medical profession and its policy in reference to the

care of crippled children and in othr measures is shaped with this end in view of giving this child the proper attention it requires, but to do it through the local profession and if possible aid the local doctors to carry this out themselves.

The Medical School has established clinics for crippled children in different sections of the state in order to give these children a service that heretofore they have not been able to get. These clinics are developed only on request of the local medical society to the School that this be done. All local arrangements for securing the clinical material are under the control of the local physicians. Only those patients who cannot afford to secure a physician to care for them and those who are sent or brought in person by their family physician may attend these clinics. The Medical School sends a member of its Orthopedic Department to these clinics once a month to take care of those whom the local medical group have assembled together. These clinics are being held in Hutchinson, Pittsburg, Dodge City and a new one is soon to be established at Ellsworth or Hays. They have been carried on a little over a year and over two hundred crippled children have received attention who would otherwise have been neglected. This is the answer of the Medical School and the medical profession to the growing demand of the people of the state that these unfortunate children be given every opportunity to overcome their physical handicaps. It has not only helped these children but has done so through the local physicians with the assistance of lay organizations.

The policy of the Medical School to cooperate with the profession of the state makes it unwilling to enter into competition with any practitioner. This is especially true of the specialties, such as the x-ray. Owing to the fact that the School is supported by the state it is often faced with delicate situations, for example, that of giving a service that it can give and a citizen of Kansas badly needs, but one which belongs to a doctor in the town where the patient lives. Such a patient is advised to return to his doctor but he often insists that he does not want him any more and, inasmuch as he pays taxes, that the School must take care of him. This is done but he is charged the usual professional fee unless his doctor signs a statement that he is unable to do so. Patients often deny that they have a doctor and the School is at times imposed upon by them. An effort is made to prevent this if possible. It is for this reason that patients who are sent in for special examination and treatment without a written statement from their doctor frequently are put at some inconvenience until they can be consulted by the Superintendent of the Hospital to see if they are legitimate cases for this service. Prompt and adequate service is insured if the doctor sending the patient communicates with the hospital beforehand, or sends a written statement with the patient especially noting what is wanted and whether the patient can pay the usual fees. Even then delays occur because the Hospital is usually crowded with patients.

There is an active free dispensary in the School. Many patients from over the state who can afford to see a private physician come to this clinic. An effort is made to discourage them but as a state institution this is very difficult to enforce. A man states he has no money and it is too expensive for the School to investigate his case; hence he is taken at his word and treated accordingly.

There is some misconception among physicians regarding the Hospital. Many seem to have the impression that because it is a state institution that it has many free beds and is supported by the state. There are no free beds. The Hospital must secure its support from the fees that it collects from patients. Most of the beds are ward beds for which $15.00 is charged per week. There are many free patients but these patients are county patients whose hospital bills are paid by the counties in which they reside. Moreover, the Hospital beds are almost always filled so that no patient should be

sent in without a reservation being made in advance.

There is another field where the School is planning to be of assistance to the members of the profession in the state. The progress of modern medicine is becoming so rapid that it is impossible for the average busy practitioner to sift out the important advances and make use of them without taking repeated postgraduate courses every few years. For the average man this is impracticable not only because of the expense but also because of the interruption of his practice that it entails. The School is planning on bringing the postgraduate instruction to his door following the plan that first became popular in North Carolina and has recently proved successful in Oklahoma. The School is at present seeking advice from the profession to see how many are interested in such a course. If a sufficient number manifest a desire for it, it will probably be offered in the next year.

The policy of the School is to be of service to both the state and the medical profession. It emphasizes the spirit of service to each of its graduates and is ready to assist them in rendering this service after they enter practice. The same assistance will be gladly given to any reputable practitioner of the state. Any suggestions or criticisms regarding the work of the Medical School are always welcome for from them its service is often made more efficient.

H. R. WAHL, M.D.

MEDICAL SCHOOL NOTES

Dr. Willis C. Campbell, Professor of Orthopedic Surgery, University of Tennessee College of Medicine, talked to the Senior Class, Tuesday, March 29.

Dr. Sam H. Snider addressed the students of the Kansas City Teachers' College, on the subject "Tuberculosis," Monday, March 28.

Dr. Richard L. Sutton was the guest of the President and Faculty of the University of Missouri. He gave a natural science lecture in Jesse Hall, in the evening, and while at Columbia also lectured at Christian College and Stephens College.

Dr. C. C. Dennie talked over the Star Radio on the subject, "The Evolution of Electricity in the Treatment of Disease," March 30.

Dr. Richard L. Sutton was the guest of the Saline County Medical Society at a dinner and meeting on March 16th. In the evening he gave a public lecture at the Marshall High School.

Dr. Pearl Matthai, of the class of 1926, has accepted an internship at the Los Angeles Childrens' Hospital, Los Angeles, California.

Dr. E. T. Gibson addressed the Girls' Health Club at the Paseo High School, April 7. Dr. Gibson's subject was "Mental Hygiene in the New Public Health."

At the meeting of the American College of Surgeons, March 28, 29, the following members of the Faculty took part on the program: Dr. C. B. Francisco, Dr. John G. Hayden, Dr. Thomas G. Orr, Dr. J. L. Meyers, Dr. Sam E. Roberts, Dr. L. F. Barney, Dr. N. F. Ockerblad, Dr. Frank R. Teachenor.

Dr. I. J. Worf spoke over the Star Radio on the subject, "Only A Cold," April 6.

At the recent election of the Academy of Medicine Dr. L. F. Barney was elected President, Dr. J. G. Hayden, Vice President, and Dr. F. C. Helwig, Secretary. Dr. P. T. Bohan was appointed a member of the Executive Committee.

Dr. Harry M. Gilkey of the Pediatrics Department has been granted a leave of absence to study in a childrens Hospital in Berlin.

DEATHS

D. R. Stoner, Ellis, Kansas, aged 47, died suddenly while assisting in removing furniture from a burning dwelling, April 17th, 1927. Dr. Stoner graduated from University Medical College, Kansas City in 1905. He has been for a number of terms councillor for the tenth district.

Henry M. Hall, Lincoln, Kansas, aged 91, died March 20th at Rochester, Minn. He graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1858.

Zachariah Nason, Kansas City, Kansas,

aged 72, died February 20th, of retroperitoneal sarcoma. He graduated from the College of Physicians and Surgeons, Baltimore, in 1888; was formerly professor of obstetrics in the University of Kansas School of Medicine and was on the staff of Bethany Hospital. He was a member of the Society.

Dr. John Cornelius Entz, Salina, aged 54, did February 7, 1927, of pernicious anemia. He graduated from Eclectic Medical College, Cincinnati, Ohio, in 1896.

SOCIETIES

DECATUR-NORTON COUNTY SOCIETY

The Decatur-Norton County Medical Society met at the State Sanitorium for Tuberculosis on April 6, 1927 at 10:00 a.m. and the following program carried out. Two incipient cases of tuberculosis in children were presented to the society by the sanitorium staff, and discussed, and x-ray plates shown.

At noon, luncheon was served to the physicians and their wives.

At 2:00 p. m. the business meeting convened and the following program was given A case of mitral insufficiency in a young child, and a case of endocarditis in a woman 60 years of age were brought, by Dr. Ben Morris and Dr. I. L. Parker, respectively.

An excellent paper on malignant endocarditis was read by Dr. C. C. Fuller, which was discussed by Dr. Kenney, Dr. Boughnou and Dr. Parker.

Dr. H. P. Boughnou of Kansas City then read a splendid paper on coronary occlusion, which was well received by the society and was generally discussed by several of the members. He presented a different side of what was supposed to be a rather unusual condition; but from his description it occurs much more frequently than was formerly thought.

Upon motion by Dr. Lathrop, seconded by Dr. Piper, Dr. Boughnou was voted in as an honorary member, with all the privileges of the same.

A letter from Dr. Sterrett of Hutchinson was read, inviting all golf players to be at Hutchinson if possible on Monday, May 2nd, for a doctors' golf tournament. .

At the same time that the doctors were in session the ladies' auxiliary was organized. It is undrstood that the ladies will meet frequently at the same time the physicians do.

The doctors and wives were entertained at 6:30 dinner at the Kent hotel by the local physicians.

The following members and visitors were present: Dr. H. Boughnou, K. C., Dr. V.. C. Eddy, Dr. C. W. Cole, Dr. J. H. A. Peck, Dr. H. O. Hardesty, Dr. I. B. Parker, Dr. Benj. Morris, Dr. Demay, Dr. Walter Stevenson, Dr. G. A. Leslie, Dr. R. M. Tinney, Dr. C. S. Kenney, Dr. H. M. Hostetler, Dr. C. C. Fuller, Dr. E. L. Morgan, Dr. F. D. Kennedy, Dr. W. C. Lathrop, Dr. F. R. Funk, Dr. H. S. Bennie, Dr. F. E. Gaither, Dr. W. J. Lowis, Mr. F. E. Walton, Omaha, Dr. Lottie F. Law, Dr. D. H. Morgan, McCook, Dr. J. Jeurinck, Dr. M. J. Renner, Dr. F. H. Smith, Dr. W. F. Deal.

C. S. Kenney, M.D., Secretary.

MISSOURI-KANSAS NEUROPSYCHIATRIC SOCIETY

The Missouri-Kansas Neuropsychiatric Society met at State Hospital No. 2, St. Joseph, Missouri, April 13, 1927.

Dr. T. H. Romeiser, presented a case of late encephalitis epidemica, with a torsion spasm.

Dr. H. O. Daniel presented a case of parkinson syndrome, following encephalitis.

Dr. J. H. Parker presented a case of multiple sclerosis, with spastic paraplegia.

Major Edgar King, U. S. A. Disciplinary Barracks, Ft. Leavenworth, read a paper on "The Commoner Mental Defects and Disorders, and their Detection in the Selection of Recruits."

E. T. Gibson, Secretary.

SEVENTH DISTRICT SOCIETY

The Seventh District Medical Society enjoyed another of its meetings at Sterling on Wednesday afternoon and evening, April 13. On account of theatening weather the attendance was not large, but a profitable program was enjoyed by those fortunate enough to be present.

Dr. Alfred O'Donnell of Ellsworth gave a paper on "Some Observations on Diseases of the Biliary Tract."

Dr. F. L. Dennis of Dodge City, on "Mistaken Etiology and Treatment of Hay Fever.'

Dr. A. E. Bence of Wichita, on "Low Backache." Dr. Bence had car trouble and did not arrive till the dinner hour, but all were glad he was able to be with us, and his paper, as well as each one given, was thoroughly enjoyed and well discussed.

The Sterling fraternity entertained the society at dinner and the Music and Ex-



The Diagnostic Department of Research Hospital

23rd & Holmes Sts., Kansas City, Mo.

The Diagnostic Department of Research Hospital was established in November 1924. Patients are received for diagnosis from reputable physicians. On completion of examinations, reports, which include the patient's history, physical examination, laboratory and x-ray reports, the findings of various specialists and the final diagnosis with recommendations for treatment, are sent to the patient's physician—in no instance will reports be given to patients. The fee includes all necessary tests and examinations. The following Departments are represented:—

Medicine, Surgery, Orthopedics, Neurology, Oto-Rhino-Laryngology, Ophthalmology, Urology, Dermatology, Gynecology, Obstetrics, Radiology, Pathology, and Electrocardiography.

For further information address:

THE DIAGNOSTIC DEPARTMENT OF RESEARCH HOSPITAL
23rd and Holmes Sts., Kansas City, Mo.

Grandview Sanitarium

KANSAS CITY, KANSAS

The Grandview Sanitarium was completely destroyed by fire. Fifteen years active work in the sanitarium business enabled us to know our needs for the future. We have planned, built and completed what we believe to be an ideal place and are open and ready for business. Thanking our friends for their patronage in the past and assuring you we are prepared to give as good service as can be had in any sanitarium, we remain,

Very truly yours,

E. F. De VILBISS, M. D.,
Superintendent.

Office 917 Rialto Bldg., Kansas City, Mo.

pression Departments of Sterling College furnished after-dinner entertainment with a Male Quartette and with a one-act play entitled, "The Dear Departed," which pleased all.

Officers elected for the coming year are: Dr. R. W. Springer, Kingman, President; Dr. M. C. Jenkins, Pratt, Vice President; Dr. H. R. Ross, Sterling, Sec.-Treasurer.

The fall meeting will be held at Larned in October.

H. R. Ross, Secretary.

WILSON COUNTY MEDICAL SOCIETY

The Wilson County Medical Society met at Neodesha Friday evening, April 22d. Dr. Earle G. Brown, Secretary of the State Board of Health and President of the State Society was the guest of honor and speaker of the evening.

Dr. Brown spoke for an hour on the organization of the State Board of Health and birth and death reports and other things. The talk was very interesting and threw light on the functioning of the State Board.

Dr. C. H. Kinnaman, State epidemiologist, talked on diphtheria toxin-antitoxin and one could see he is an enthusiast on the subject.

The discussion was general; Dr. Brown remarking that we should be careful and de-sensitize when in doubt.

The President, Dr. W. H. Young, then called on Dr. C. O. Shepard of Independence and Dr. Ross of Sterling, guests, who responded with short interesting talks.

This society was much pleased with the speakers and want to thank them for an enjoyable and profitable evening.

Adjourned to meet in May.

E. C. Duncan, Secretary.

SUMMER CLINICS, CHICAGO MEDICAL SOCIETY, 1927

Announcments and schedules will soon be ready for the 1927 Summer Clinics of the Chicago Medical Society, supported by many of the largest hospitals in the city, among them being the Post Graduate Hospital, Chicago Memorial Hospital, University of Illinois College of Medicine, Cook County Hospital, Michael Reese Hospital, Mercy Hospital, Presbyterian Hospital, Jackson Park Hospital, St. Luke's Hospital, Ravenswood Hospital, Mount Sinai Hospital, Francis Willard Hospital, West Suburban Hospital, Evangelical Hospital, North Chicago Hospital, Chicago Lying-in Hospital, St. Joseph Hospital, Alexian Brothers Hospital, Laboratory of Surgical Technique, Washington Park Hospital, Jackson Park Hospital, Chicago Municipal Tuberculosis Sanitarium, John B. Murphy Hospital. Several of our large laboratories have also agreed to co-operate with us in this great work.

In 1926 we limited registrations to physicians living in Illinois, but our increased facilities make it possible to accomodate many more than last year. Registrations therefore will be open to physicians from other states and to as many as may be accomodated, in the order of their registrations. Registration fee will be $10 for each two weeks course, payable at time of registration, and a physician may register for only one course of two weeks.

Admission will be by card only, issued by the Chicago Medical Society and no registration card will be issued until registration fee is paid.

The first two weeks course will begin on Monday, June 13th, 1927, at 9 a. m., ending Friday, June 24th.

The second two weeks course will begin on Monday, June 27th at 9 a. m., ending Friday, July 8th..

This is an excellent opportunity for the medical men of the country to obtain real post graduate work in some of the best hospitals in the world, and from some of the best clinicians found anywhere.

Schedules will be sent to the 10,000 physicians in Illinois, and announcements will be sent to the American Medical Association, and the several state medical journals.

Dr. Lawrence Nelson '19, visited in Kansas City, Kansas a few weeks ago.

WANTED—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

WANTED—We have several well-trained practical laboratory technicians graduating from our school of public health May 15; physicians, hospitals and health departments desiring such service can secure it by writing immediately; first come, first served. Address, Dr. L. H. South, State Bacteriologist, 532 W. Main St., Louisville, Ky.

FOR SALE — Carbon Arc Lamp, a Spencer Microscope and a Victor-Wantz X-Ray machine, all in first class condition. Mrs. J. C. Entz, 448 South 9th St. Salina, Kansas.

WANTED TO BUY — Ten-inch X-Ray transformer. Must be guaranteed. Coolidge equipment unnecessary. P. O. Box No. 217, Kinsley, Kansas.



JOHN A. DILLON, M. D., Larned
President-Elect Kansas Medical Society

THE JOURNAL
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PRESIDENT'S ADDRESS

Accomplishments of Preventive Medicine

EARLE G. BROWN, M.D., Topeka, Kansas

Read at sixty-first annual meeting of the Kansas Medical Society, at Hutchinson, May 3, 4, 5, 1927.

For sixty-eight years the members of the Kansas Medical Society have played an important part in the moulding of the destinies of the State. Not only this Society but the State as well has suffered an irreparable loss in the untimely death of Dr. B. F. Morgan whom you honored at the 1926 meeting by designating as your president elect. Even though ill at the time he assumed the presidency of the society his interest in the welfare of this organization never waned. Today, our society has attained its standing through the efforts of such outstanding men as Dr. Morgan and others. It is fitting that tribute shall be paid to the memory of Dr. Morgan, by one who has been actively associated with him for so many years.

By action of the executive committee, it has now become my pleasure to serve as your president, an honor which comes to comparatively few men and the honor which I personally consider the greatest it is possible to confer upon any medical man in Kansas.

PURPOSE OF THE SOCIETY

The purpose of this society shall be to federate and bring into one compact organization the entire medical profession of the State of Kansas, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition, and to enlighten and direct public opinion in regard to the great problem of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ACCOMPLISHMENTS OF PREVENTIVE MEDICINE

History tells us that more than 400 years ago, Ponce de Leon founded the City of San Juan, the first town founded on what is now American territory. Ponce de Leon was an old man, crippled by many wounds that he had received in war. Wonderful tales had reached his ears of a "Fountain of Youth", that those who drank from these waters would be young and strong again—no matter how old or sick he was. Special permission was given by the King to make the search for the "healing waters" and in the course of time, as is well known, he arrived in what is now the State of Florida. He searched everywhere for the fountain; he drank from every spring that he could find. Yet, he remained old and his wounds were still painful. He finally died as the result of an injury received from a poisoned arrow shot by an Indian.

How to prolong youth and postpone old age has long been the quest not only of adventurers but also of scientists. Yet, man still continues to live his approximate three score and ten. There is no way of changing the numerical age that man may live, but physical age may be postponed, preserved and made to function long past the allotted three score and ten. Yet, frequently the extension of man's life, if it means an extension of discomfort, is a burden. To be a comfort, the extension of years must be accompanied by physical and mental soundness.

The desire to live long has ever and always will be universal. Today, as in past years, no one wishes to be old. It is the ambition of many a small boy to grow up so that he may wear knickers just like his dad. We find, consequently, in the change of ideas, more relaxation from the busy affairs of life than in the past. The busy man finds time to play golf, to motor, to take a vacation from the daily routine of business, which results in a rest to both his physical and mental activities with a consequent benfit not only to himself, but to his business, his associates and his community.

The results achieved in the past fifty years in the prolongation of human life

may be credited largely to preventive medicine; the result of the control of the communicable diseases; education in personal hygiene and marked improvements in sanitation. According to Dr. D. B. Armstrong, the death rate from all causes in New York City in 1824 was 31 per 1,000 population; 41 in 1851 and 29 in 1875. In 1925, the death rate was 12 per 1,000 population or an actual reduction of three fifths in a period of fifty years.

C. E. A. Winslow, President of the American Public Health Association in his address at Buffalo in 1926, quoted as follows: "The statement that in 1879-80 the crude death rate or average number of persons dying annually in each 1,000 of the population of New York-Brooklyn was 22, while in 1919-20 it was 13, does not convey much meaning to the average citizen. But when the same change is expressed in the statement that in 1879-80 the average length of human life in New York-Brooklyn was 36 years, but in the present New York City in 1919-20, it was 53 years, showing an increase of 17 years, or 47 per cent, within that forty year period, then the statement gains greatly in significance and carrying power." Professor Winslow further concluded: "That in two generations the average length of human life should have been increased by almost one-half must arouse in us a sense of reverent wonder at what God hath wrought for mankind through the application of modern science."

Unfortunately vital statistics are available for the State of Kansas only since the year 1912. I believe, however, the following analysis of mortality by causes, by Dr. Haven Emerson and prepared by Professor Winslow for New York City for the past fifty years, will be of interest:

Table I

MORTALITY FROM CERTAIN SPECIFIED CAUSES AND FROM ALL CAUSES PER 100,000 POPULATION

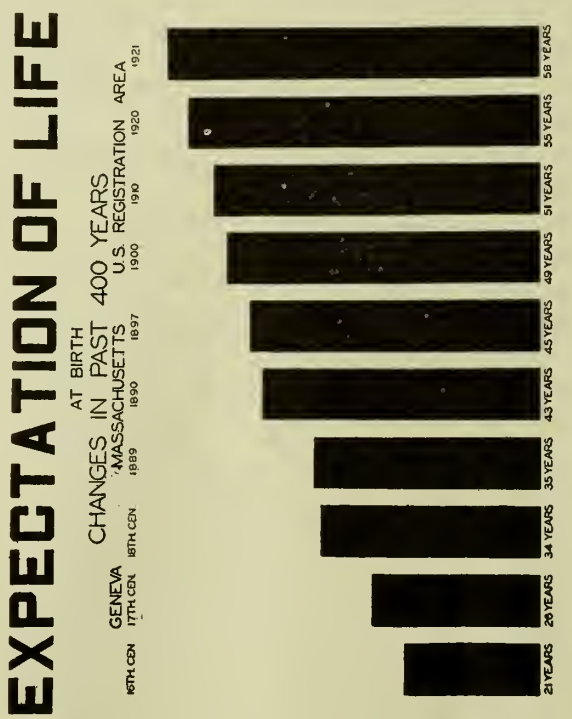
	Manhattan and Bronx 1873-75	Greater N. York 1923-25	Per Cent Change
Scarlet Fever	80	1	-99
Diphtheria and croup	235	11	-95
Diarrhea under 5 yrs.	335	22	-93
Dis. of Nervous sys.	252	39	-85
Pul. Tuberculosis ...	404	84	-79
All other causes not listed	874	316	-64
Acute respiratory dis.	352	164	-53
All causes	2,890	1,220	-42
Bright's disease and Nephritis	100	69	-31
Violence	120	85	-27
Cancer	41	113	+176
Heart Disease	89	255	+187
Dis. of the Arteries .	8	61	+650

Note the principal causes of death in the first period: pulmonary tuberculosis, the acute respiratory diseases, diarrhea, diphtheria and croup. Note the standing of these same diseases in the second period.

The postponement of the event of death with the prolongation of human life means that physical defects must be prevented, or if they develop they must be corrected. According to Webster, health is: "The state of being hale, sound, or whole in body, mind or soul; well being; especially, state of being free from physical disease or pain."

The best definition of health that I know, is that of Williams: "Health is that quality of life that renders the individual fit to live most and serve best." This definition takes into consideration the fact that the individual must be free from disease to attain the perfection that he may live on past his allotted numerical years.

It has been stated by competent authorities that it is not impossible some day the life expectancy will be 100 years, which would be an increase of the present life expectancy of about forty years. Briefly the lengthening of the expectation of human life at birth in 400 years, may best be shown in material prepared by Irving Fisher:



Most of the gain due to improvement in death rates under age 45.

While we are intensely interested in life extension in the Registration Area of the

United States, we should be equally interested, if not more so in the record of our own state as compared with other states, and shown in the official report of the U. S. Bureau of the Census.

Table II

COMPLETE EXPECTATION OF LIFE IN YEARS AT BIRTH

(Bureau of the Census)

State and Year	Males	Females
Total:		
Massachusetts:		
1890	42.50	44.46
1900-1902	46.07	49.42
1909-1911	49.33	53.06
White, 1919-1920:		
Pennsylvania	53.27	55.96
Massachusetts	54.07	56.56
California	54.51	58.44
Aggregate of 27 states	55.33	57.52
South Carolina	56.04	57.70
Tennessee	58.61	58.48
Wisconsin	58.81	60.73
Kansas	59.82	61.02

It has been shown that it is possible to eradicate some of the major preventable diseases. As time progresses and investigators continue their work, additional diseases will be added to the list. Today, we have specific preventive measures for small pox, typhoid fever, diphtheria, tetanus and rabies. Development of sanitation has witnessed the elimination from our fair land cholera, bubonic plague and typhus fever, although occasionally a case may be imported from some foreign country. It is of further interest to note, however, in the 1926 report of the Surgeon General of the United States Public Health Service that no cases of plague, yellow fever, cholera or other major preventable diseases were imported during the year covered in the report.

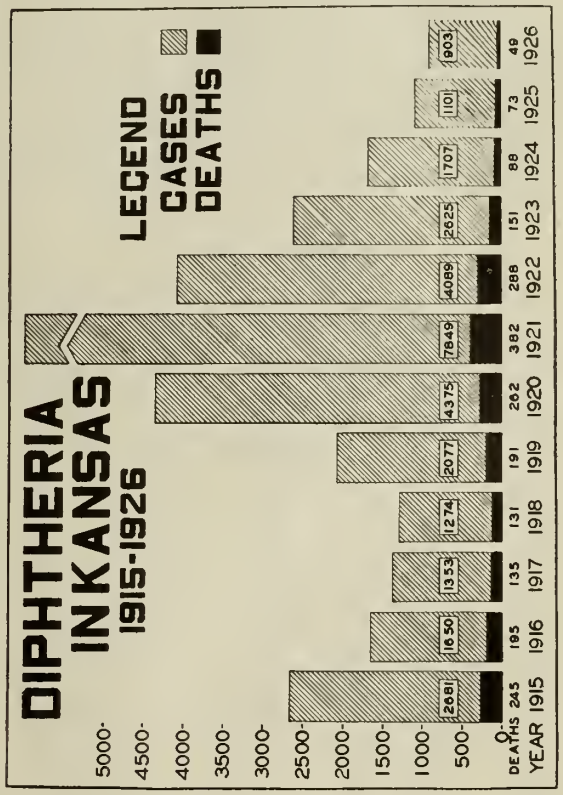
As an example of what has been accomplished in Kansas in the actual saving of lives, I wish to call your attention to what has been done in the control of certain communicable diseases. Morbidity statistics are available for the principal communicable diseases only since the year 1905. Likewise, unofficial death rates are available for certain of the communicable diseases for the period of 1905 to 1911 inclusive:

Table III

DIPHTHERIA IN KANSAS

Year	Number of Cases	Morbidity Rate	Number of Deaths	Death Rate per 100,000
1905	1,800	116.5	251	16.3
1906	2,256	139.9	296	18.3
1907	1,267	76.7	204	12.3
1908	1,301	78.5	194	11.7
1909	1,471	86.1	201	11.7
1910	1,497	88.2	186	10.9
1911	781	46.3	67	4.0
1912	715	42.3	121	7.1
1913	655	38.8	137	8.1
1914	1,669	99.8	170	9.7
1915	2,681	160.2	245	13.7
1916	1,650	96.1	195	11.1
1917	1,353	77.8	135	8.63
1918	1,274	73.4	131	6.83
1919	2,077	118.0	191	10.7
1920	4,375	245.7	262	13.9
1921	7,849	437.7	382	20.9
1922	4,089	226.2	288	16.6
1923	2,625	143.8	151	8.7
1924	1,707	93.0	88	5.0
1925	1,101	60.7	71	3.5
1926	903	49.5	49	2.7

You will note in the twenty-two year period under consideration that in no five-year period, prior to the past five years, has there been a consecutive drop in both the number of cases and deaths. Antitoxin has been available for a period of thirty years for both the treatment of cases and the active immunization of contacts. Prior to the introduction of antitoxin approximately seventy-five per cent of cases died; today, the percentage of deaths in Kansas has dropped to less than six per cent.



It is particularly gratifying to note that in 1924 of all the states in the Registration Area, Kansas with a diphtheria death rate

of 5 per 100,000 population tied with Mississippi for the lowest rate. In the year 1925, Kansas led all other states with the lowest diphtheria death rate, 3.5 per 100,000 population, the next lowest being Maine with 4.3, and Iowa being third with 4.8. The continued work in diphtheria control in 1926 shows results in that only 49 deaths occurred in the entire state, an actual saving of 22 lives from the previous year, or if you wish to so consider it, an approximate one-third decrease in deaths in the twelve months. The death rate for the year was 2.7 per 100,000 population. It does not seem possible that any other state will make a more marked decrease in their diphtheria death rate and Kansas should again enjoy the very great pleasure of demonstrating to other states what may actually be accomplished in the saving of human lives, the great majority of which are children under ten years of age.

"Diphtheria Must Go" is the slogan that has been officially adopted by the Kansas State Board of Health. This is not an idle slogan for it is a human possiblility to entirely eliminate diphtheria among children. If health officers, physicians, school authorities and parents would adopt a co-operative program and work together, within the next three years, diphtheria would be eliminated among Kansas children.

I next wish to direct your attention to what has been accomplished in the control of typhoid fever.

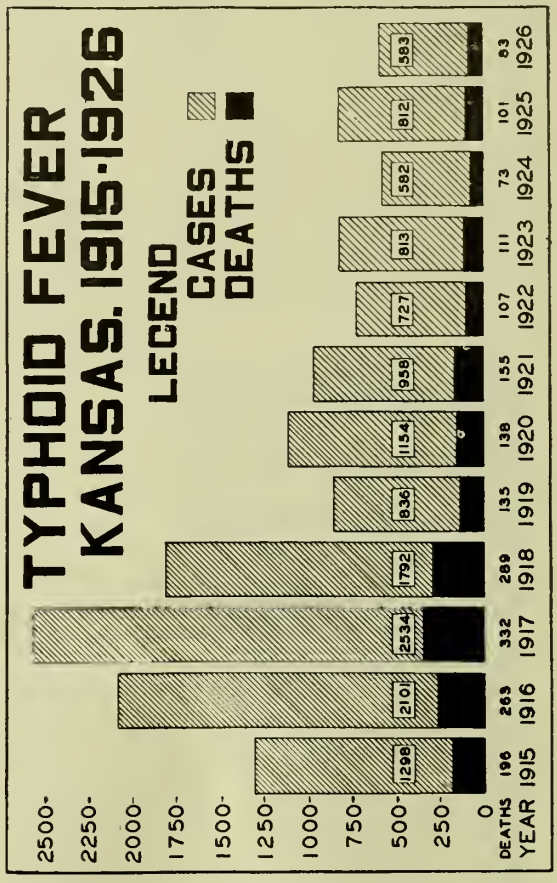
Table IV

TYPHOID FEVER

Year	No. of Cases	Morb. Rate	No. of Deaths	Death rate 100,000	Case Fatality
1905	1,728	111.8	397	25.7	22.9
1906	1,731	107.3	368	22.2	21.2
1907	1,994	120.7	440	26.6	22.0
1908	1,136	68.5	346	20.8	30.4
1909	1,399	81.9	401	23.5	28.6
1910	2,079	122.5	383	22.9	18.6
1911	1,622	96.1	384	22.8	23.6
1912	1,537	90.7	345	20.7	22.4
1913	1,957	116.0	342	20.3	17.4
1914	1,684	100.7	338	20.2	20.0
1915	1,298	77.6	196	11.7	15.1
1916	2,101	122.4	263	15.3	12.5
1917	2,534	145.8	332	19.1	13.1
1918	1,792	103.3	289	16.7	16.1
1919	836	47.5	135	7.6	16.1
1920	1,154	64.8	138	7.8	11.9
1921	958	53.4	155	8.6	16.1
1922	727	40.2	107	5.9	14.7
1923	813	44.5	111	6.1	13.6
1924	582	31.7	73	4.0	12.5
1925	812	44.7	101	5.6	12.4
1926	583	31.9	83	4.5	14.2

It is impossible to control typhoid fever epidemics unless the source of infection is found, for a case of typhoid fever always originates from a previous case or carrier. It is not an impossibility with proper effort to trace not less than 90 per cent of all cases of typhoid fever that occur.

If statistics were available for a period of years prior to 1905, the morbidity rate, the death rate and case fatality rate would all undoubtedly be much higher. We all remember the part that typhoid fever played in the Spanish American War. Many of the medical officers who saw service in the recent conflict, did not see a case of typhoid fever among our troops in either this country or abroad. We do not deny the fact that some cases of typhoid fever occurred, but they were of so infrequent occurrence as to be of no serious consequence.



The source of infection in 88 per cent of cases occurring in 1925, in the State of Kansas was definitely traced as follows:

Infected milk and food	45 per cent.
Tourists drinking from polluted wells, springs and streams	25 per cent.
Bathing in rivers, creeks and ponds	10 per cent.
Contact infection	8 per cent.
History not obtainable	7 per cent.
Questionably diagnosed	5 per cent.

In former years, typhoid fever was es-

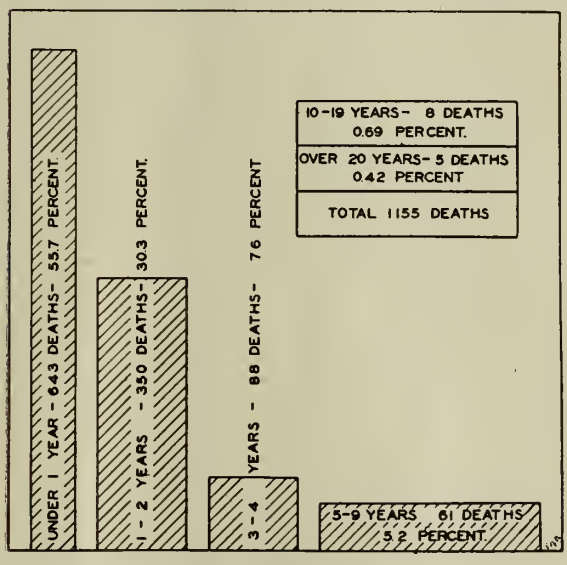
sentially a disease of adults. However, in recent years, there has been a decided change in the age incidence, the most susceptible age group in 1925 being 10-14. 402 of the 812 cases were in the age group, 5 to 19. The change in age incidence emphasizes the importance of a clean milk supply, as children are largely milk drinkers. Approximately one seventh of all cases of typhoid fever reported in 1925, were from three cities in the state—the result of transmission of the disease by milk.

We believe the decrease of typhoid fever in Kansas may be attributed to the following factors:

1. Better treatment and nursing service.
2. Immunization of many thousands of citizens during the war and the continuation of the immunization program.
3. The placarding of premises where the cases occur.
4. Improved water and milk supplies.
5. Improved sanitary conditions of the communities.
6. Decreased number of flies.
7. The release of cases and carriers after negative cultures have been secured.
8. Sanitary disposal of sewage and garbage in the majority of the cities in the state.

WHOOPING COUGH DEATHS—KANSAS

AGE DISTRIBUTION OF 1155 DEATHS, 1916-1925



Whooping cough is another of the infectious diseases to which we should give our most serious consideration. Considered by many parents as a disease that the child should have and "get it over with" this disease each year exacts a toll of human lives, more than 85 per cent of them under three years of age. With no known absolute preventive, the responsibility of protecting the children lies largely with the medical profession in the prompt reporting of the cases that they see, the placarding of the home and the education of the public at large as to the importance of reporting the cases which occur, but which are not seen by physicians. It is true that the great majority of cases of whooping cough are not seen by physicians which is all the more reason that physicians should promptly report their own cases.

Although there has been for more than 125 years a sure preventive against smallpox, there are still many thousands of people who have not been convinced of it's value. This is best proven by the data showing the occurrence of cases and the deaths in the past twenty-two years. Fortunately, smallpox in Kansas the past five years has been for the most part, of the mild type.

Scarlet fever may be said to be epidemic in the state each year, also taking its toll of lives, the majority of them being children. The importance of the control of this disease with no known absolute preventive also requires the prompt diagnosis of cases, the reporting of same and the necessary restrictive measures not only of cases but also of contacts. It is only within the past three years that there has been any marked reduction in the death rate, which may be attributed largely to better reporting and quarantine.

For comparison, we have also listed measles and tuberculosis data. It can only be deducted that the reporting of measles cases was very incomplete prior to the year 1916. The history of measles from the time of it's first description is that it has always been the most infectious of all the communicable diseases. Preventive medicine has made comparatively little progress in it's control. Definite steps forward have been made, however, in the decreasing of the number of deaths by the quarantine of cases and progress has been made in some communities in actually decreasing the number of deaths by the quarantine of both the cases and contacts.

Preventive medicine has played an important part in the decrease in the tuberculosis death rate. Tuberculosis, undoubtedly occurs in less frequent numbers than twenty years ago, although the number of cases reported may show an increase. Act-

Table V

Year	SMALLPOX Cases	SMALLPOX Number Deaths	SMALLPOX Death Rate per 100,000	SCARLET FEVER Cases	SCARLET FEVER Number Deaths	SCARLET FEVER Death Rate per 100,000
1905	4,116	33	2.1	1,359	76	4.9
1906	1,871	4	0.24	1,340	68	4.2
1907	1,859	9	0.54	1,084	68	4.1
1908	3,624	8	0.48	1,757	75	4.5
1909	2,197	4	0.23	1,343	66	3.8
1910	2,213	14	0.82	2,898	188	11.1
1911	2,115	23	1.3	2,799	77	4.5
1912	340	3	0.17	1,740	60	3.6
1913	1,087	4	0.23	1,414	53	3.1
1914	1,964	7	0.41	870	35	2.1
1915	3,010	8	0.47	1,457	35	2.1
1916	2,085	3	0.17	2,249	57	3.3
1917	2,579	4	0.23	3,483	54	3.1
1918	7,078	26	1.5	3,097	72	4.1
1919	2,437	1	0.05	2,754	49	2.7
1920	3,900	3	0.17	5,091	100	5.6
1921	4,630	48	2.6	6,535	111	6.1
1922	842	68	3.7	4,658	73	4.0
1923	483	0	0	3,650	65	3.5
1924	1,166	4	0.21	3,353	36	1.9
1925	311	1	0.05	3,369	35	1.9
1926	535	2	0.10	3,198	34	1.8

ually, tuberculosis control work in Kansas has been at a standstill for the past nine years as reference to the death rates will show. Comparatively few beds are available for the cure of tuberculosis patients, the total in the state being less than 200. Through appropriations by the 1927 session of the Legislature provisions have been made for at least sixty additional beds at the State Sanitarium at Norton, which will allow in the next year approximately 200 beds at that institution alone.

Table VI

Year	MEASLES Cases	MEASLES Number Deaths	MEASLES Death Rate per 100,000	TUBERCULOSIS Cases	TUBERCULOSIS Number Deaths	TUBERCULOSIS Death Rate per 100,000
1905	561	27	1.7	1,318	965	62.4
1906	1,396	45	2.7	3,045	882	54.7
1907	6,503	90	5.4	1,157	996	60.3
1908	2,442	32	1.9	1,142	943	56.9
1909	3,784	47	2.7	909	761	44.5
1910	9,206	111	6.5	1,019	715	42.1
1911	6,930	37	2.1	2,620	860	50.9
1912	2,457	60	3.5	*831	1085	66.9
1913	7,031	102	6.0	*941	1088	64.1
1914	4,310	71	4.2	1,073	1005	60.1
1915	7,255	64	3.8	1,333	978	58.4
1916	13,471	158	9.2	1,510	970	56.5
1917	22,464	275	15.8	1,617	1017	58.5
1918	10,510	312	17.9	1,959	792	45.6
1919	998	12	0.68	1,532	692	39.3
1920	6,632	83	4.6	1,836	869	48.8
1921	9,782	78	4.3	2,529	778	43.3
1922	518	5	0.27	2,436	784	43.9
1923	10,785	72	3.9	2,161	764	41.9
1924	20,263	129	7.0	2,554	765	41.7
1925	450	4	0.22	2,440	779	42.9
1926	10,574	86	4.7	2,164	747	40.9

*Incomplete reports

Heart disease for years has caused the greatest number of deaths of any one disease and we must recognize it as one of the diseases which very properly comes under the province of preventive medicine. In early adult life, heart disease frequently follows an acute infectious disease, tonsillitis or focal infections, while in old age it may be classed almost entirely as a degenerative process. There is, however, no sharp dividing line in old age, for the man who dies as the result of an organic heart lesion at 70 years of age, may have had that defect as the result of a diphtheria or

scarlet fever at five years of age; the result of a syphilitic infection at twenty years of age; an infected tooth at thirty years of age; the result of continued errors in diet at forty years of age, or it may have been a true senile degeneration.

The number of deaths from heart disease has increased rapidly in the past as may be seen in a study of the data for the past fifteen years.

The avoidance of contagion, proper care if it does develop, proper nourishment, fresh air, recreation and rest must necessarily play an important part in the prevention of heart disease. The importance of measures in the prevention lie in its early detection and the enforcement of measures that will most protect the heart in after years.

Heart disease, causing as it did in 1926, 12.9 per cent of all deaths in the State of Kansas, demands that we as physicians do our part in it's prevention.

Table VII

HEART DISEASE*

	Number of Deaths	Rate per 100,000	Percent of Deaths
1912	1,489	89.1	8.6
1913	1,475	87.5	8.2
1914	1,494	89.3	8.5
1915	1,665	99.5	9.2
1916	1,911	111.3	9.5
1917	2,003	115.3	9.5
1918	1,901	109.5	7.1
1919	1,612	91.6	8.3
1920	1,943	109.1	9.5
1921	1,676	93.4	9.1
1922	1,952	108.0	10.3
1923	1,698	93.0	8.5
1924	2,134	116.3	11.9
1925	2,286	126.0	12.2
1926	2,491	136.6	12.9

*Exclusive of angina pectoris.

Another factor that we must consider most seriously is that of the cancer problem.

For the present we must rely largely on the surgeon, the use of the x-ray and radium for the control of this disease. There is no question that improved methods of diagnosis is one of the reasons why there are more deaths from cancer than there were fifteen years ago. The question, however, is not definitely settled as to whether or not there is an actual increase in the number of cases. The cancer problem is acute and demands that such steps be taken as are necessary for its control. There is no organization better fitted to teach educational measures for cancer control than a medical society. The first principle in its control is to teach the public the dangers of the disease and the warning signs that presage its development.

Table VIII

CANCER

Year	Number of Deaths	Rate per 100,000	Percent of Total Deaths
1908	550	33.1	*
1909	501	29.3	*
1910	767	45.2	*
1911	796	47.1	*
1912	1056	63.2	6.1
1913	975	57.8	5.4
1914	1059	63.3	6.0
1915	1111	66.4	6.1
1916	1220	71.1	6.0
1917	1224	74.0	5.8
1918	1267	73.0	4.7
1919	1228	69.7	6.3
1920	1297	72.8	6.3
1921	1396	77.8	7.6
1922	1408	77.9	7.4
1923	1461	80.1	7.3
1924	1390	75.8	7.7
1925	1529	84.3	8.1
1926	1674	91.8	8.7

*Total deaths not available.

CONCLUSIONS

1. Progress in preventive medicine has been made through the efforts of the regular medical profession, by individual physicians, medical organizations, and health departments.

2. The results have been accomplished largely through improved sanitation, better control of communicable diseases and public health education.

3. There has been an actual increase in life expectancy, with Kansas having the longest life expectancy of any state in the Registration Area.

4. Diphtheria has shown a definite decrease in Kansas and with an intensive cooperative program could be eliminated in the state in the next three years.

5. Typhoid fever, likewise, has decreased in both numbers of cases and deaths, as a result of the better control of cases and carriers, better sanitation, immunization and the protection food and water supplies.

6. Deaths from heart disease are increasing from year to year, and we as physicians should carry to the people of the state the message of prevention.

7. Cancer deaths are on the increase and the importance of its control lies in the prevention through early diagnosis and treatment.

8. Personal health cannot be purchased. Public health may be purchased and it lies largely within the province of any community, large or small, to determine as to the

occurrence of diseases and the resulting deaths.

COUNTY MEDICAL SOCIETIES

The success of the County Medical Society depends largely upon the energy of the secretary, for he in a large measure is responsible for the programs. The lack of cooperation of some of the county medical societies may be attributed largely to the inactivity of the secretary. When an active secretary is elected and is interested in the success of his society he should be retained in office. The Kansas Medical Society is dependent on the component societies for whatever success it may attain.

BUREAU OF PUBLIC RELATIONS

Medical science has progressed remarkably in the past few years, and with its development has come the various types of cults and fadists. We believe that we as medical men are at least in part to blame, in that as members of the State and County Medical Societies we have neglected one of our most important duties, i. e., Public Health Education. This function is usually considered a part of health department activities, yet should be ever foremost in the minds of each of us. Within the past few months, there has been established by our society, a Bureau of Public Relations, the essential duty of which is Public Health Education. There has been a splendid response from a large number of newspapers in the use of articles supplied by this Bureau and many of the county societies have utilized some of the speakers who have volunteered their services. Those of you who do not know of the work of this important branch of our society should familiarize yourself with it, and each member should give his enthusiastic support. Dr. McVey will give a detailed report which will, I am sure, convince you of the value of this Bureau.

STORMONT LIBRARY

By the gift of Mrs. Stormont and by legislative enactment the State of Kansas holds Stormont Library in trust for the Kansas Medical Society. It is provided that the income from funds invested by the State shall be used for the purchase of books and pamphlets. It is provided further that a committee shall be appointed by the Kansas Medical Society, which committee shall advise with the librarian in the purchase of books. The by-laws of our Society do not provide for a committee and it is recommended that this Society will by amendment to the by-laws provide for the appointment of this important committee.

PUBLIC MEETINGS

At the Annual Meeting last year, a resolution was adopted requesting county and district medical societies to hold if possible, at least one public meeting during the year. Many of the societies have held such meetings. This is a constructive program and should be continued through succeeding years.

AUXILIARY

It is a great pleasure to note with the succeeding years the part that the Kansas Medical Auxiliary is taking. The work of the Auxiliary, especially as relates to Public Health Education, would be greatly enhanced if auxiliaries were formed in each of the counties or districts having organized medical societies. I hope that each of you will personally aid in the organization in your respective counties of an Auxiliary.

DIPHTHERIA CONTROL

The enviable position that Kansas occupies today in diphtheria control has been accomplished largely through the cooperation of the county medical societies with school authorities, parent teacher's associations, etc. We believe that the county medical society should sponser and take an active part in the program for a 100 per cent immunization of Kansas children, which would eliminate the possibility of any Kansas child contracting diphtheria either within or without the state.

PERIODIC HEALTH EXAMINATIONS

Extensive investigation among thousands of individuals whose death has occurred after middle life shows that the majority of such deaths are the result of such diseases as nephritis, diabetes, degenerative changes of the heart and arteries, cancer and tuberculosis; all of them diseases which are chronic in character and very insidious in their onset. The physician finds in such cases that there is little to do except in a palliative way, whereas if conditions had been detected earlier, it would have been possible in many instances by a change of diet or the daily routine, without seriously interfering with efficiency, to prevent their development or at least postpone that development for several years. Physicians now realize the importance of urging all, especially those who have passed

the noon day of their life, to visit a capable physician at least once a year—a good time is on their birthday—for the purpose of securing a physical examination in order to detect, if present, those conditions responsible for the majority of deaths after middle life. We belive that this society should take such action as is necessary to inform the public at large as to the value of the periodic health examination.

POST GRADUATE COURSES

We are advised that the University of Kansas Medical School is considering the providing of post graduate courses which will be conducted in certain communities in the state. The great majority of the members of this society for various reasons are unable to remain away from their communities for an extended length of time, and we believe the program as outlined by Dean Wahl will serve its purpose and deserves the support of the members of this society and especially those members who wish to benefit themselves in the practice of medicine. It is believed that if sufficient interest were shown, courses of instruction could be arranged for those who were especially interested in periodic health examinations.

CHILD WELFARE

The recent session of the Legislature has provided funds for a constructive child welfare program in the state. Maternal and infant mortality rates have decreased and the greatest decreases have occurred where intensive work has been done—especially in those communities which have health departments operating on a full time basis. Child welfare conferences play an important part in the reduction of infant mortality and such conferences sponsored by county medical ssocieties and cooperating with the State Board of Health would accomplish much good.

BASIC SCIENCE ACT

The propesd Basic Science Act was introduced in both Houses and reported unfavorably by the committees. There is no doubt but this bill had merit and deserved the support of everyone interested in raising the preliminary quailfications of those who would practice the healing art. While some of the committee members admitted that the proposed bill had its good qualities, the general opinion was that it was not needed at the present time. Similar bills were introduced in the Washington and Minnesota legislatures and have now become laws.

AN ACT RELATING TO THE BOARD OF MEDICAL REGISTRATION AND EXAMINATION

I believe that it is known by only a few members of this society that a bill was introduced in the legislature to abolish the Board of Medical Registration and Examination. The bill was cleverly drawn in that if it had passed it would not have been possible for any new physicians to locate in the state, for that particular section of the Medical Practice Act which required the applicant to pass an examination was not disturbed. The introduction of this bill in our opinion was a direct reflection on every practicing physician in the state and perhaps may be attributed to our inactivity in public life.

Today, it is considered, especially by lay people, that further medical legislation is unnecessary and is simply an attempt by physicians to further impose on the public. It is possible that it was with this idea in mind that the proposed bill to abolish the Medical Registration Board was introduced.

The Legislative Committee of the Society did a splendid work during the past session of the legislature, but it was impractical for those members living outside of Topeka to attend the sessions and the work of necessity, was largely done by the Topeka member. There should be introduced at the 1929 session, legislation which would benefit not the medical profession itself, but would raise the preliminary requirements of those who would practice in the State, as a result of which the public at large would benefit. The time to arouse interest in such legislation is not when the 1929 session convenes. The time to begin is the present. First with the public to acquaint them with the needs for such legislation and then after the primary to ascertain from the nominees of all parties their attitude as to medical legislation. Each county medical society should have a legislative committee and if such a program would be carried on in the counties, it would be possible to secure such legislation as is needed.

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Vitaglass is now being used in greenhouses to germinate and grow plants quickly. The growth is said to be more vigorous and the plants grow taller. Perhaps it will be used to grow bigger and taller men and animals.

IN MEMORIAM

Dr. B. F. Morgan

C. C. STILLMAN, M.D., Morganville

Read at sixty-first annual meeting of the Kansas Medical Society, at Hutchinson, May 3, 4, 5, 1927.

A year ago, at the Kansas City meeting, it was my pleasre to place before the House of Delegates the name of my friend, Dr. B. F. Morgan, for the Presidency of this Society. As you all know, he was elected to that honorable position.

At that time nothing was farther from my mind than that I should be called upon to come before you today to say something in the way of a tribute to his memory. Dr. Morgan died at his home at Clay Center on the morning of February 28 of angina pectoris.

Had I the talent to make an extended and elaborate eulogy on his many good qualities, none would be more bored than would he. This point is sharply defined by an act of his, only a few days before his death. He knew that the end was near. He called his son to the bedside and directed that a certain minister of the community and who was a close friend be called in. He wanted to and did arrange for certain features of his funeral service. He directed that a talk of not more than ten minutes be made by the minister. That wish was complied with. To dwell upon the sordid and the morbid was not his idea or desire.

My acquaintance with Dr. Morgan dates from 1891. He was at that time a comparatively young practitioner of medicine at Riley. I was a student reading medicine, as we used to do, in the office of his brothers at Clay Center. After my graduation we practiced in adjacent towns for almost thirty years. During this time we have been the closest of friends. We have worked together and we have played together.

Dr. Morgan loved his profession and loved life. He was ever in all of his undertakings, work or play, a most active man. What he did he did with enthusiasm and joy. His efforts never were characterized by a fog of indeterminate and undefined bewilderment. To approach a patient's bedside with an "Oh my, what shall we do?" air of nervous uncertainty, causing fear to settle both upon the ill and the attending household, was NOT Dr. Morgan. Instead, his was an attitude of cheerfulness and direct decision that at once inspired confidence and new courage. His watchword seemed ever to be, " Let's get going."

He was the same in his play. An enthusiastic devotee of practically all of the outdoor sports, and always wanted "something going on." Not during his entire life was it ever his role to "sit on the porch and rock."

As was most natural for a man of his activity and enthusiasm, his strength of character and purposefulness in whatever he undertook, rather many honors came to him. Of these he was ever appreciative and always grateful to the last degree. It is known to me that he regarded this last one with the highest esteem of them all. It seems now to have come as it were as a clima to them all. I allude to the Presidency of this Society, held by him at your hands at the time of his death. He was most proud of this distinction and I am sure would want his extreme gratitude carried to you today. It is my honor to do that.

To close I will read, with your permission, a brief eulogy to him as expressed by our local paper, the Clay Center Times:

> Dr. B. F. Morgan was a man who loved life. He enjoyed living; enjoyed association with people; took pleasure in every kind of activity. Whatever he did he did with his whole soul, heart and mind, drawing from it whatever pleasure there was to be had. He was never lukewarm. He was either in a thing or he wasn't. And when he was in, every associate knew he was there. He did not look upon the sordid features, nor saw the imperfections. But the pleasure, the fun, the exhilaration appealed to him. If a matter was not enjoyable he dropped it, seeking some other outlet for his activities, where good fellowship was to be had; where the sun could shine. Darkness and shadows had no appeal. It was out in the open where he loved to be, where men were men and the joys of life could be partaken of without stint. "If my time has come," he said, not a great while ago, "I am ready and willing to go, right now. But if my time has not come, I want to be up and out and part of the world. I want, and am willing to take one or the other." It was quite characteristic of the man. It is regrettable that he who knew how to draw from the flowers of life the perfume, the beauty and the sweetness and so consistently avoided the noxious, should not have been spared for many a long year to come.

Achlorhydria

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The following discussion deals with an attempt to classify the various clinical conditions associated with achlorhydria as they occur in the middle west, paying special attention to the incidence of pernicious anemia, a word as to its cause, diagnosis and associated clinical findings, and a paragraph relative to its treatment.

The data were taken from the records of the Research Hospital, the Diagnostic Department of the Research Hospital and from private file and the report will be an analysis of one thousand cases in which complete examination of the stomach contents, both fasting and after an Ewald meal was made. Incidentally it might be mentioned that the reasons for making stomach analysis varied and perhaps more of the patients were suspected of having hyperacidity than achlorhydria.

1000 cases

102 Complete achlorhydria.
Males, 54, females 48, 20 were below 45 years of age.
35 Chronic cholecystitis—17 of which had Ekg evidence of myocardial change.
14 X-ray and clinical evidence of gall stones; 7 of which had Ekg evidence of myocardial change.
20 Pernicious anemia.
9 Carcinoma of the stomach.
4 Carcinoma of the colon.
6 Hypothyroidism—all women passed the menopause, except one girl 19 who had marked anemia, primary in type.
17 Visceroptosis.
25 Ekg evidence of myocardial change. 17 had cholecystitis; 7 had gall stones.
14 Colitis—either chronic or acute.
31 X-ray and clinical evidence of spastic colon.
13 Chronic appendicitis.
10 Degenerative arthritis.
6 Proliferative arthritis.
58 Habitual constipation.
8 Frequent attacks of diarrhea.
16 Arterial hypertension.
26 Dental sepsis.
34 Infected tonsils.
5 Cercomonas intestinalis found in the stools.

20 Pernicious Anemia Cases

20 Over 45 years of age.
Youngest 45—oldest 66.
20 Hemoglobin index more than 1.
2 Hypothyroidism.
17 Cord changes.
16 Gave history of having had sore tongue.
9 Gave history of having had attacks of diarrhea.
7 Had Ekg evidence of myocardial change.
16 Habitually constipated.
Lowest hemoglobin reading, 18% Dare.
Highest hemoglobin reading, 75% Dare.
Lowest RBC.. count, 1,220,000.
Highest RBC. count, 3,210,000.

DISCUSSION

The incidenece of achlorhydria is usually given as about 10 per cent of hospital population.

Eggleston in 2730 cases found 276 or 10% with achlorhydria.

Hurst in 325 cases found 34 or 10.5%.

Present series of 1000 cases, 102 or 10%.

We have used the term achlorhydria as meaning simply an absence of free HCl., that is the stomach contents, fasting and after an Ewald meal. Strictly speaking the term implies as well an inability on the part of the stomach to secrete gastric juice as well as HCl. and ferments.

Eichorn, who in 1892 coined the term achlorhydria, considered the phenomenon to be due to certain nervous disturbances and cited the fact that he had demonstrated the presence of well preserved gastric glands in cases of achlorhydria and that he had seen cases of achylia return to normal secreting power as proof that the condition was essentially functional. Previous to this Kussmol and later Ewald, demonstrated rather constantly the presence of atrophy of the gastric glands in achlorhydria and gave the condition a definite anatomical basis. Later Martius proposed the term constitutional achylia or achylia gastrica simplex. His theory embodied Eichorn's idea of a functional basis, but insisted that the cause instead of being dependent on nervous phenomenon, depended on a hereditary tendency, in other words he proposed a constitutional weakness of the organ as an explanation. Recently Faber of Copenhagen in a clinical and histological study of properly preserved stomachs for clinical and experimental achlorhydria cases, found that achlorhydria is due to a disease of the gastric mucous membrane and its extensive glandular appendages. That achylia when excited through the various nervous channels is only temporary and apart from this is always due to the same causes which

produce disease in other organs, namely, direct irritation or hematogenous intoxication by bacterial toxins or auto-toxins. He insists in the use of the term gastritis, meaning, instead of the old conception gastric catarrh, a disease of the glandular parenchyma of inflammatory nature which renders the stomach incapable of producing HCl. or ferments. Hurst insists that a certain long chained hemolytic streptococcus originating in the tonsils and particularly in the teeth as causative agents. Munich accuses certain members of the B. Coli group. Kahn, the acidophilus and Torrey, B. Welchii.

The tendency of achlorhydria to persist when once established makes the condition of course more prevalent in later life. Thus Seidelin found diminished acidity in 40% of working people above the age of 50 years and in old persons above 65 years of age he found an acidity in 67%, admitting that the percentage is greatest in the elderly. It follows that the cause should be sought in the young. Chiewitz and Anderson found in 127 children nothing which could be regarded as congenital achlorhydria. The causes in children being, 1. Parental febrile diseases and, 2. Affections of the gastric intestinal tract particularly varieties of infectious enteritis.

COMBINED SCLEROSIS OF THE SPINAL CORD

In 1922 Hurst and Bell reported 8 cases of combined sclerosis of the spinal cord, in all which gastric analysis showed a complete absence of free HCl. They speculated as to the significance of this finding and later made gastric analysis on 8 cases of disseminated sclerosis and in nine consecutive cases of tabes. Achlorhydria was found in only one case, a tabetic. Vanderhoff recently reviewed the literature on the subject and reported 7 cases of combined sclerosis all of which had total absence of free HCl. in the stomach contents. He reported excellent clinical results in the treatment of those cases, with large doses of HCl. These writers conclude that achlorhydria is one of the essential etiological factors in combined sclerosis.

All seventeen cases with cord changes had absence of free HCl. The relation of pernicious anemia to combined sclerosis of the spinal cord, has been emphasized by many investigators. Woltman, in a study of one hundred fifty cases of pernicious anemia, found cord changes in 80.6% Newfeld found cord changes in 77% of post-mortem examinations on pernicious anemia cases. Munich and Hurst consider the associations between pernicious anemia and combined sclerosis of the cord is artificial. Most of the earlier investigators assumed that the degenerative changes in the cord resulted from vascular changes incident with the anemia however Collier points out that many cases of combined sclerosis progress to a fatal issue without developing anemia and in many others the cord symptoms may be found years before the anemia develops. He concludes that neither the cord sclerosis or the pernicious anemia is dependent one upon the other but that they are concomitant but not necessarily synchronous results of the same cause. The almost constant association of achlorhydria with pernicious anemia has been recognized for years—in fact we would hesitate at some length to make a diagnosis of pernicious anemia in a patient whose stomach contents contained free HCl. Characteristic of the achlorhydria of pernicious anemia is its completeness and invariability it is apparently present throughout the course of the disease and is unaffected by remissions even though the blood picture and count approaches normal. Achlorhydria is often present for years before the pernicious anemia develops as in a case recently reported in Guys Hospital who had a normal blood count but achlorhydria in the same hospital 17 years before the anemia developed. In Hurst's case the achlorhydria antedated the pernicious anemia by 14 years. Hurst reasons that since achlorhydria so frequently preceeds the development of pernicious anemia that it must constitute a predisposing factor.

He assumes a bacterial background as the immediate cause of pernicious anemia made possible by the lack of inhibiting power of HCl. on a certain strain of hemolytic streptococci which he was able to cultivate from the gastric and duodenal contents of these cases. Cohn thinks the hemolytic toxin is a by-product of some member of the B. Coli group rendered more potent by the lack of HCl. Recently Torrey has isolated large members of B. Welchii from the stools of 26 pernicious anemia cases, subsequent workers having corroborated these findings. Of course B. Welchii are rather common in the normal stool but they are found in much larger numbers and with greater ability to produce toxins in the stools of pernicious anemia cases. Herter offered evidence 20 years ago incriminating B. Aerogens capsulatus as a factor in severe anemias.

Cornell working with B. Welchii was able to transplant the organisms in the duodenum of dogs and rabbits, and ob-

served blood changes similar to those found in pernicious anemia. The animals show signs of chronic infection with fall of hemoglobin and RBC. with an index of +1 anisocytosis was constant and he thinks the change in size and shape of the RBC. is due to the action of the toxin direct. It is also known that the toxin of B. Welchii is capable of producing definite changes in the central nervous system of a degenerative nature. It is quite conceivable that insomuch as various oxidizing agents, ie, Dakin's solution, neutralizes the toxin for B. Welchii, that in some manner the absence of free HCl. in the stomach contents predisposes to a lack of (eg) Hypochlorite in the duodenal contents which would otherwise neutralize the toxin. I have done some work on rabbits and pigeons along this line and at present am carrying on some additional work with such an idea in view.

The results will be reported later. In general the diagnosis of typical cases of pernicious anemia is not difficult although cases are frequently encountered in which a differential diagnosis between pernicious anemia and other hemolytic as well as non-hemolytic anemia is exceedingly difficult, certainly the subjective and objective symptoms are at time variable and not always specific for the disease. The blood counts are often misleading, nucleated RBC are inconsistent and in many cases little can be learned from direct observation of stained smears. More accurate results can be obtained by the use of accurately calibrated counting pipets. It is interesting to know that variations from 10-20% occur in some of the pipets sold on the market, another factor of error is in the accurate estimation of hemoglobin.

A simple accurate clinical hemoglobinometer would be welcomed by all. We have used a Dare hemoglobinometer in these cases. The volume index is a helpful procedure in doubtful cases, but subject to about the same degree of technical error as the counts and hemoglobin estimates, probably not to quite as great an extent. The constant blood finding in pernicious anemia is of course the great variation in size of cells, normal cells being 7.2 mm. while in pernicious anemia the average size is 8.3 mm. I am not aware of a satisfactory clinical method for the accurate estimation of Urobilin, this is indeed unfortunate, because many doubtful cases, especially sub-icteric cases of other origin than pernicious anemia could be ruled out. Usually with a history of prolonged loss of strength, occasional attacks of vague indigestion, diarrhea, with or without tongue sore or loss of weight in a patient over 40 years of age who has achlorhydria, anemia, with Hg. and volume index of +1 the diagnosis of pernicious anemia is justified, only after other sources of hemorrhage are excluded. After the diagnosis is once established the all important question arises as to treatment. I think most of us agree that inorganic iron compounds are more or less inert, especially if we accept in any measure the work of Williamson, however the idea of giving Iron in some form is respectable for its antiquity if not for scientific reasons. We have all seen repeated blood transfusions induce remissions which we feel would probably not have occurred by other methods, but still we do not feel that in general, transfusions greatly prolong the life of pernicious anemia patients. To me pernicious anemia is always an emergency and I usually give blood transfusions, using whole blood, the amount depending upon the general conditions of the patient and his blood count. We feel that the small dosage of HCl. heretofore given is entirely inadequate, and that large doses of 3-5 drachms daily given over long periods of time is our best medical remedy.

Until recently diet has not played as important a part in treatment as its merits seem to justify. I think this fact is due to the fact that clinics have failed to utilize the scientific facts founded by research workers. In 1920 Whipple reported convincing data on the rate of blood regeneration, following the feeding of certain articles of diet, considering the normal blood regeneration rate following controlled hemorrhages in dogs to be about 3-5% daily, he studied the effects of various foods on the rate. His conslusions were that carbohydrate and fat retard and protein enhances the rate. Carbohydrate diets retard the rate very definitely even fasting animals showed greater power of blood regeneration than the controls fed with sugar. In explanation of the above he assumed that the starving animals metabolized their own body protein which in turn had the power to increase the rate of blood regeneration. Whereas in the animals fed carbohydrate diet the failure to regenerate was due to the protein sparing power of the sugar. This is perhaps somewhat theoretical but certainly to the point. Diets high in protein produced most rapid blood regeneration and it is interesting that he noted liver protein was much more potent than other forms of meat and that both

liver, kidney and muscle were more potent than milk. High fat diets retard blood regeneration.

Wahl demonstrated the regeneration of blood in animals rendered anemic by the use of saponin, with high cholesterol diets, ie, egg yolk.

It is of course common knowledge that carnivorous animals and muscular individuals have higher hemoglobin contents than do herbivorous animals and obese individuals.

Gibson and Hurd, utilizing Whipple's data and the fact that certain lipoid substances enhance hemolysis used diets of low caloric value 15-1900 cal. rich in iron (liver) egg yolk (anti-hemolytic power of cholesterine, and for its high iron content) green vegetables, in general with very low fat values. A somewhat similar diet was used by Fenlin. Their results seemed promising.

Recently Minot and Murphy have embodied these principles in a diet which goes by their name and have reported excellent results in 45 cases of pernicious anemia. They claim uninterrupted remissions in all but three cases very early approach to normal of blood counts and return of strength and sense of well being in all the cases.

Their diet is as follows.

The food listed contains about 2050 calories derived from about 115 grams of protein 65 of fat and 250 of carbohydrate.

BREAKFAST

Approximate weight in grams.
Fruit, choice of:

(a) Orange juice, from 2 oranges	130
(b) Grapefruit, 1 whole medium-sized one	240
(c) Strawberries, 5½ tablespoons	180
Shredded wheat, 1 biscuit	30
Milk, 2 tablespoons	30
Sugar, 1 level teaspoon	5
Beef, minced, 2 heaping tablespoons	75
Cream, 20 per cent, 4 tablespoons	60
Toast, 2 slices (each slice 4x2x¼ in.	10
Butter, 1 rounded teaspoon, or a piece 1x1x⅞ in.	10

LUNCHEON

Liver, broiled	120
Lettuce or cold slaw, large helping	80
Potato, cold, sliced, or baked, hot, 1 small one	80
Tomato, stewed,, 5 tablespoons, or raw, 2 medium size	150
Cauliflower or Brussels sprouts, an average portion or 3 tablespoons	130
Zwieback, 2 pieces	30
Butter, 1 level teaspoon or a piece 1x1x½ in.	5
Apricots, stewed, 3 heaping tablespoons	120

DINNER

Soup, consomme (any amount desired) mixed with sieved liver (flavor with spice)	75
Mutton, 2 large slices, trimmed of fat	100
Beets or peas, 3 tablespoons	100
Potato, boiled, average size	130
Spinach or string beans, an average portion or 3 to 5 tablespoons	150
Butter, 1 level teaspoon or a piece 1x1x½ inches	5
Toast, 2 slices (each slice 4x2x¼ in.	20
Blancmange, 2 heaping tablespoons (made of ¼ cup Irish moss, 2 cups milk, 1 tablespoon cream, 20 per cent, 2 teaspoons sugar)	100
Blueberries, 5 tablespoons, or apple sauce with 1 level teaspoon (5 grams) of sugar, 2 tablespoons	80

(Fruit could be mixed with blancmange).

This diet can be adjusted to meet the maintenance requirement of the individual, remembering to keep fats relatively low, and to increase calories by additions of vegetables and fruits and protein.

We have had 8 pernicious anemia patients and 16 patients with severe secondary anemia on the above diet, during the past three months. While it is admittedly too early to speculate as to the final outcome, nevertheless the progress of these cases far surpasse the general progress in patients previously treated with high caloric diets, blood transfusions and HCl. I have been somewhat dubious in the matter of using the diet alone in the treatment of any case and consequently these cases have received from 1-3 small blood transfusions, large doses of HCl., 3-5 drachms daily, and iron and arsenic in various forms. The results are of course comparative only.

I want to mention in particular two cases: A motion picture operator, 45 years of age with unquestionable pernicious anemia. Hemoglobin 23%, RBC 1,104,000. Had a fair remission following 3 blood transfusions of 2-3- 500 cc.'s respectively. 3 drachms HCl. dilute daily, had a high caloric diet. His blood count mounted to Hg. 65, RBC 3, 120,000 in 14 days and remained about constant; for six weeks he felt better, his lemon yellow tint disappeared and he was able to go to work. A

little later he began to complain of malaise again, his hemoglobin dropped to 45% and his RBC to 2,000,000. He was put on the Murphy Minot diet and without additional blood transfusions, his blood count, 30 days later was Hg. 75%, RBC. 3,440,000. He is at present at work and thinks he is cured, his last blood count was Hg. 80, RBC. 3,880,000.

The other case, a school teacher, female, unmarried, age 47, diagnosed pernicious anemia 3 years ago, mother and two sisters have died of pernicious anemia. The patient developed rapidly progressive signs of combined cord sclerosis one year ago, and when seen by us, was compelled to walk on crutches. Her Hg. was 60%, RBC 2,740,000. She was given 1 small blood transfusion, put on 4 oz. dilute HCl. daily, and a Murphy Minot diet. At present, some three months later, she is able to drive her Ford over some 75 miles to Kansas City and shop in the stores for hours without aid. Her blood count at present is Hg. 83%, RBC. 4,100,000. All the remaining 6 pernicious anemia cases have made similar improvement with the exception of one man, 56 years old, who died within a week after the diet was instituted. I have been decidedly impressed with the rapid improvement in the blood picture of the fourteen cases of so called secondary anemia.

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Control of the Streptococcic Infections With Particular Reference to Scarlet Fever and Erysipelas

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Abstract of address delivered before the Kansas School for Health Officers and Nurses, April 12, 1927.

Streptococci are those bacteria which divide in one plane only, and when observed under the microscope appear as chains or strings of beads. The name streptococcus, therefore, has reference entirely to the morphology of the organisms and includes a number which differ considerably both as regards cultural and immunological properties. The great majority of the Streptococci are gram positive and aerobic. Schottmueller made groupings of the Streptococci based on biochemical knowledge. He divided them into three groups.

1. Streptococcus pyogenes, which causes hemolysis on blood agar plates.

2. Streptococcus viridans which produces a green zone about the colonies on blood agar plates.

3. Streptococcus mucosus which produces a mucoid-like, dark green zone below the colony.

Later workers have shown that the latter group should really be included under the heading of pneumococci, and this leaves us only two groups—*streptococcus hemolyticus* and *streptococcus viridans.*

Streptococcus hemolyticus is the most important group to Public Health workers, as there are included in this group the streptococci which have been shown to be the cause of scarlet fever, the strain shown to be the cause of erysipelas, and the one responsible for certain cases of puerperal sepsis. The other group includes the strains which may possibly be the cause of measles and rheumatic fever.

The most important member of the group of streptococci is streptococcus scarletinae which has been shown by the Drs. George F. and Gladys H. Dick to be the cause of scarlet fever. Our knowledge of the cause, prevention and treatment of scarlet fever began with the announcement by them that this disease had been produced in volunteers by inoculation with pure cultures of hemolytic streptococci isolated from cases of scarlet fever. Many workers had thought that the streptococcus which is usually present in the throat of persons with scarlet fever was of some etiological relationship, but until the work of the Drs. Dick in 1923, Koch's postulates had not been fulfilled in regard to the relationship of streptococci to that disease. They demonstrated that the characteristic symptoms of the disease were caused by a specific toxin produced by scarlet fever streptococci, and that recovery and subsequent immunity are due to the production of the corresponding anti-toxin.

About the same time, Dochez announced a streptococcus serum prepared by the use of special methods in the immunization of horses. This serum was also found to have antitoxic properties. Based upon the work, primarily and principally, of the Dicks, the diagnosis, prevention and treatment of scarlet fever may now be considered to be on a definitely established basis—just as definite as our measures are for the control of diphtheria. The use of the Dick test for determining susceptibility to the disease, the use of scarlet fever toxin for active immunization, and the use of scarlet fever anti-toxin for treatment, will not only make it possible to save many thousands of lives annually, but will also prevent incalculable suffering from the complications and sequelae of scarlet fever.

The Dick test is a reliable clinical meth-

od for determining susceptibility to scarlet fever. A faint reddening, 1 cm. or over in any diameter, indicates on the part of the individual some degree of susceptibility to scarlet fever. A positive reaction usually beings to occur in 4-6 hours after injection, and reaches the maximum in 18-36 hours.

Extensive clinical trials have established ample evidence that active immunization with scarlet fever toxin is a logical procedure. Immunity following adequate doses of the toxin develops within two weeks after completion of the treatment and lasts for at least three years (which is the longest period individuals have been under observation) and possibly for life. It is important in active immunization against scarlet fever that sufficient toxin be administered to immunize without producing harmful reactions, and at the same time protect against the disease. Over 85% of individuals who have received 52,000 or more skin test doses of toxin show a negative Dick test when retested.

There is present some reddening and local swelling at the site of injection which appears in a few hours and begins to spread in 18 to 48 hours. General reactions are comparatively few and usually consist of some malaise, with nausea and fever. A scarletinal rash may follow the first dose in highly susceptible persons, but such reactions seldom follow any but the first dose. None of these reactions is as severe as those that sometimes occur following a course of immunization with typhoid vaccine. No bad effects have been reported from properly graduated immunizing doses. Vaccines containing killed streptococci have long been advocated for immunization against scarlet fever; but any value they may have depends solely on the presence of free scarlet fever toxin. Some treatments quite extensively distributed contain an insufficient number of skin test doses to bring about active immunity in a high percentage of cases. Recently, the so-called detoxified scarlet fever toxin has been extensively employed; but it may be stated that this preparation is still in the experimental stage, and is therefore not to be used except under careful clinical control, as failure to protect may have serious results.

Anti-streptococcic serum has long been advocated for the treatment of scarlet fever; but this serum was tested not for anti-toxin properties, but for bacterial antibodies, and when used in the unconcentrated and unrefined form resulted in frequent and severe reactions. It was weak in anti-toxic properties and therepeutically not effective.

The demonstration by the Drs. Dick of the etiology of scarlet fever and the discovery by them of the specific toxin of the disease and its corresponding anti-toxin laid the scientific foundation for the development of a specific, potent and standardized scarlet fever anti-toxin.

Scarlet fever anti-toxin prepared according to the Dick method is obtained by the immunization of horses with scarlet fever toxin, and the anti-toxic serum from these horses is concentrated, not only to increase the potency, but also to remove the non-essential proteins and thus reduce the frequency and severity of serum reactions. Sufficient time has now elapsed since the announcement of the discovery of Scarlet Fever anti-toxin by the Dicks to have allowed a thorough clinical trial of its value not only for passive immunization, but also in the treatment of the disease. The value of the anti-toxin may be summed up by stating that the administration of a properly prepared, standardized, concentrated scarlet fever anti-toxin in a case of scarlet fever is followed by a blanching of the rash, lowering of the temperature, improvement of general condition and, when given early, a great diminution of the incidence of complications and sequelae.

The next member of the group of streptococci to which we wish to give consideration is the streptococcus erysipelatis which was given its name by Fehleisen in 1883 when he made his bacteriological studies on erysipelas.

Other workers since then have made contributions to our knowledge of the biological and serological relationship of this strain of streptococci to erysipelas. Birkhag has been successful in demonstrating that the strains of streptococci found in erysipelas lesions are different from those of scarlet fever, empyema, peritonitis, tonsilitis, septicemia, etc. In 1925 Birkhaug was successful in producing a typical erysipelas in rats with strains of hemolytic streptococci isolated from human cases of erysipelas. He also found that streptococcus erysipelatis produced in beef broth a soluble toxin, and that the intradermal injection of 1-10 cc. of a suitable dilution of this broth filtrate in susceptible persons caused the appearance of a reaction resembling a positive Dick test.

Birkhaug also produced an anti-toxin by immunization of animals with strains of streptococci isolated from cases of erysipelas, and the use of this serum in a series of

cases was reported by him. Since then the serum therapy of erysipelas has been placed on a scientific basis by reason of the availability of concentrated erysipelas anti-toxin. The intramuscular injection of proper doses of this anti-toxin into persons suffering from erysipelas is followed by a prompt improvement of the toxic depression of the patient, a rapid and almost critical drop in temperature, pulse and respiration almost to normal, a rapid fading and disappearance of the erysipelas lesions and absorbtion of the blebs and pitting edema.

The third member of the group of hemolytic streptococci to which brief reference will be made is that strain which has been isolated by Lash and Kaplan from cases of puerperal fever. These workers have been able to demonstrate that the strain of streptococci isolated from cases of puerperal fever produces a soluble toxin which when injected into susceptible individuals produces a skin reaction similar to the Dick reaction. They have found that the serum of rabbits which have been immunized by the injection of this toxin will neutralize this toxic filtrate, and there is every reason to believe that it will be possible in the near future to produce an anti-toxin effective against puerperal fever caused by this strain of hemolytic streptococci.

Recently, Tunnicliff, and Ferry and Fisher have reported that a variety of the streptococcus viridans is possibly the etiological agent in measles. These workers claim to have established the fact that this strain of streptoctccus produces a toxin which will give a positive skin reaction in those susceptible to measles, but not in those immune to the disease. They also claim that they have been able to produce anti-toxin by the immunization of animals with this organism. There has not been a sufficient amount of clinical data accumulated to enable us to definitely state whether the claims of these investigators will be upheld and the matter is therefore still undetermined.

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Rupture of Uterine Scar After Classical Cesarean Section

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Read before the Northeast Kansas Medical Society, Kansas City, Kan., Nov. 1926.

This subect is one on which there is little agreement among obstetrical writers. Difference of opinion still remain among obstetrical observers as to which is the best or worst operation, as to the strength of the scar, the classical or high operation or the low or cervical operation. Ruptures have occurred after both methods and frequent enough to cause us to seriously and carefully consider this complication in subsequent pregnancies.

As the list of indications for abdominal delivery is growing longer each year and there are so many conditions where for the present time an abdominal section is safest for both mother and child, that we must not rush into this without seriously considering the welfare of the mother in future pregnancies.

Whether "Once a cesarean section always a cesarean section," be true or not, the danger is sufficient that all pregnant women after section must be closely watched for indications of a giving way or weakening of the scar and not allowed to go on to rupture without proper care and treatment.

In the literature are reports of many normal deliveries after cesarean section, and where the indication for the first cesarean is no longer present and there are no indications of rupture, I can see no reason why these patients should not be given a reasonable test of labor, provided they are in the hospital where any complications that may arise can be promptly dealt with.

In my practice I have sectioned six women twice and one the third time, and in examining the eight uterine scars I found no evidence of weakening or giving away.

We close all uterine incisions with chromtic catgut No. 1 double, which is contrary ic catgut No. 1 double, which is contrary silk.

The question of indications for cesarean section, the best method to use, the best ligatures, and the question of sterilization after the first section are far from settled and until such a time, it behooves us to be on our guard in all pregnant women who have had abdominal section for delivery against this serious accident which, unless treated promptly and vigorously can have but one termination.

CASE REPORT

Mrs. D. age 21, 2nd para. with the following history: Many attacks of tonsilitis as a child with acute inflammatory rheumatism, complicated by endocarditis leaving a marked mitral insufficiency.

This girl married at 18 years of age, became pregnant soon after and was picked up by the visiting nurse and brought to the out-patient maternity department of Bethany Hospital when about four months pregnant with a badly decompensating heart. Under rest and digitalis the cardiac condition improved and we attempted to carry

her to term or beyond the period of viability. Just before seven months, the heart gave way and we were forced to empty the uterus to save the mothers life.

By classical cesarean section we attempted sterilization by cutting the tubes and burying the stump. Mother made good recovery but baby died from prematurity.

In a little over one year this girl again became pregnant in spite of both tubes being sectioned and was past six months before reporting to me. She was very determined against section and going to term on account of the loss of her first baby. Her heart was compensating nicely, no edema, good appetite, etc., so I agreed to allow her to go to term and enter labor. Labor pains started about seven a. m. Nov. 13, '26, quite strong from the first. She was moved to Bethany Hospital and prepared for delivery.

Upon external examination a very soft point could be felt just to the left of the umbilicus. A giving way of the old uterine scar was suspected and an immediate section was insisted upon, in consultation with Drs. Leverich and Fulton.

Upon opening the abdomen an unruptured portion of the amniotic sack the size of a base ball was seen protruding through the uterine wall at the upper end of the old scar.

The contractions of the uterus under the influence of the dose of pituitary extract given, when the incision was made and the removal of the protection of the abdominal wall; the entire scar gave way and the baby was delivered through the rent in the uterus without the use of knife.

The placenta and membranes were delivered, the scar in the uterus cut away and the opening closed in the usual way, with three rows of chromic catgut No. 1 double.

The baby, a girl weighing seven and one half pounds, the mother weighs less than 100 lbs., was alive and fine.

Mother made a nice recovery without rise of temperature or other complications, and left the hospital in good condition on the fourteenth day postpartum with her baby.

She has been in my office several times and is feeling fine and very happy with her baby. She cares for her baby and looks after her little home in perfect comfort, with heart compensating nicely.

But sterilization was surely completed this time by the removal of both tubes and a cyst off the right ovary the size of the ordinary hand ball.

KANSAS MEDICAL LABORATORY ASSOCIATION

Bacteriological Methods of Water Analysis Used in the State Water Laboratory

CASSANDRA RITTER
State Water and Sewage Laboratory,
Lawrence Kansas

The Water and Sewage Laboratory of the State Board of Health does two types of analyses,—bacteriological and chemical. Although the sources of the samples of water are the same, the tests, the amounts used, and the frequency of the analyses differ for the two types. Bacteriological examinations must be made frequently on water which changes, as treated river supplies inevitably must; so a careful check is kept on the waters of the state, by means of the laboratory work.

Various practices in bacteriological water analysis have been followed, as our knowledge and needs have grown, and variations will always be followed in diverse places. Laboratory routine differs with the types of water analyzed, and frequently with locality and the season, certain adjustments being necessary.

In order to standardize methods of analysis, and to make the best practices available to all, a manual, "Standard Methods of Water Analysis," has been prepared by the American Public Health Association and associated organizations. The first edition was published in 1905, appearing as a report made to the American Public Health Association. Subsequent editions have been prepared, each under a different group of men. The sixth and last edition, of 1925, was prepared jointly by committees from The American Public Health Association and American Water Works Association, with the collaboration of a committee from the American Chemical Society, on the chemical methods. Thus it represents the best current American practice in the laboratory examination of water and sewage. With a few exceptions, the recommendations of Standard Methods are followed in the bacteriological examination of water, in this laboratory.

Since the samples of water come in with great regularity, it is possible to follow a definite routine. The largest number of samples are from treated waters, being mostly surface supplies, which come once a week. These samples are: (1) from the filters, at the treatment plant, and (2) a tap sample from some point on the distribution system; excepting the first week of the month, at which time four samples are

sent; a raw sample, directly from the river or other source of supply; a sample from the coagulation basin, just before the water goes on to the filters, and the filtered and tap samples as before. The other samples received are ground waters requiring no treatment, which are analyzed twice a year; bottled waters and ices, analyzed once a year; swimming pools and a group classified as "public health" samples, which are usually private wells and cisterns.

Bottles of uniform size are spplied by the laboratory. They are prepared by covering the stopper and bottle top witth a cloth cap, to exclude dirt in shipping, then sterilizing in the autoclave for 15 minutes at 15 pounds pressure. They are shipped in pasteboard boxes or metal containers, which can be iced, with suitable cards for information. On arriving at the laboratory, all samples are unpacked and planted at the same time.

Since the diseases which may be transmitted by water are in the intestinal group, contamination from sewage wastes is of prime importance. This contamination can be detected the most easily and surely by testing for members of the coli-aerogenes group of bacteria. As these organisms will ferment lactose with the formation of gas, and no other organisms commonly found in water will do so, the formation of gas from lactose has been adopted as the criterion of their presence. Standard Methods recommends that the "coli-aerogenes group be considered as including all gram negative non-spore-forming bacilli which ferment lactose with gas formation, and grow aerobically on standard solid media." The total number of bacteria present gives additional information about the water, so a total count is made, frequently at different temperatures of incubation.

Standard Methods recommends the use of lactose peptone broth as the medium for testing for the coli-aerogenes group. This broth contains 3 c.c. of beef extract, 5 c.c. of peptone and 5 c.c. of lactose, per 1,000 c.c. of water, and is distributed in test tubes having an inverted vial, to catch the gas formed. In this laboratory, the only variation is the addition of basic fuchsin to the broth. Approximately 1c.c. per liter of a saturated alcoholic solution is added, and it acts as an inhibiting agent on organisms, such as anaerobes, which might form gas, but are not B. coli. For the total count, agar is used. It contains 3 gms. of beef extract, 5 gms. of peptone and 15 gms. of shredded agar, per 1,000 c.c. of water. Standard Methods also recommends that a count be made from gelatin plates, but that test is not included in this laboratory. For confirmation, to ascertain that the organisms grow aerobically, two media are recommended, both having nutrient agar as a base, and lactose for the sugar, but differing in the dye used as indicator. In one, aqueous solutions of eosin, and of methylene blue are used, and B. coli colonies are dark purple, and may have a green sheen. In the other, known as Endo's medium, basic fuchsin decolorized with sodium sulfite, produces pale pink plates, on which the B. coli colonies are red, with a green sheen. Endo plates are used for confirmations in this laboratory. All media is sterilized in the autoclave, at 15 pounds pressure for 15 minutes.

Different amounts of the same sample of water are planted, so that the test will be quantative as well as qualative. Standard Methods makes no rule about amounts, but recommends that a series of tubes should be inocluated with appropriate graduated quantities. In this laboratory, three tubes are made from each dilution, those used depending on the source of the water, the intention being to have amounts such that the test will be positive in the largest amounts and negative in the smallest amounts. Dilutions are made in 9 c.c. water blanks, prepared from sterilized tap water. As a matter of routine, four series are made from samples of raw water: 1 c.c. 1 c.c. of a 1-10; 1 c.c. of 1-100; 1 c.c. 1-1000. All variations of individual supplies, and all sources of water to be treated are thus adequately tested. For samples from coagulation basins, two dilutions are used: 1 c.c. and 1 c.c. 1-10. Samples of water from filters, tap samples, and all untreated waters, including wells, cisterns and bottled waters, are tested in amounts of 10 c.c., 1 c.c. and 1 c.c. 1-10. Certain modifications include occasional raw samples which show so little pollution that they are run as taps; and such tap samples as are used on interstate carriers, which have five 10 c.c. amounts planted, to comply with the Treasury Department standard. Swimming pools are treated as tap samples. Ices are tested by first removing a portion of the center of the cake, by a specially made bore, which has been sterilized, then treating the melted sample as a tap.

All tubes are incubated at 37°C for 48 hours. Readings are made at 24 hours, the presence of gas in the inverted vial, or active bubbling, being recorded as + in red ink. Negative tubes are incubated for 24

hourse longer, then the final results are recorded in black ink as +, or — if no gas is present, and the tubes discarded. This is the presumptive test from Standard Methods but is not adequate, especially for filtered and tap samples, consequently, positive tubes are saved from each dilution, for confirmation. The Endo plates are streaked from the positive tubes with a previously sterilized needle, and incubated at coli-aerogenes group, giving typical colon-37°C for about 18 hours. Organisms of the ies, are recorded as +; definitely negative colonies are —. This constitutes the partially confirmed test from Standard Methods, and is used routinely for all samples. For the completed test, at least two typical colonies are fished, and transferred each to an agar slant, and a lactose broth fermentation tube, and incubated at 37°C. After 24 hours, the slants are examined microscopically for spore-forming bacilli; the tubes are examined for gas formation, before not more than 48 hours. This procedure is used for atypical results in this laboratory. Due to the modification in the broth, such results are rare, but are probably due to anaerobic organisms, or symbiotic complexes of non-lactose-fermenting organisms.

Standard Methods recommends that total counts be made from agar plates incubated at 37°C for 24 hours, or 20°C for 48 hours; and from gelatin plates incubated at 20°C for 48 hours. Here, the agar count of 37° is used. The Petri dishes with porous tops are sterilized with dry heat. Plates should be made in duplicate from 1 c.c. or unit decimal fractions, so those counted will have 30 to 300 colonies and the count averaged and recorded for 1 c.c.

Results of the entire bacteriological analyses of each sample with turbidity, carbonate and bicarbonate alkalinity, and chlorides, are entered, in the laboratory on a special card, filled out with the requisite information. These cards, when finished, are returned to the office, where they are reported, and filed.

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UNIVERSITY OF KANSAS CLINICS.

Clinic of Peter T. Bohan, M. D.

Department of Medicine

CHRONIC ADHESIVE PERICARDITIS

The frequency and the difficulty in recognizing this form of cardiac disease is indicated by the statistics given by Cabot. In his new book, "Facts on the Heart," the post mortem findings are given on 1,906 cases dying from heart disease. Of these there were 112 cases with chronic pericarditis and the correct diagnosis was made in only 6. In less than half of the 112 cases was the pericardial conditions a factor in heart failure and naturally there were no signs by which it could be recognized during life. In many of the cases where the adherent pericardium was the sole cause of death, heart failure in any form was not even suspected. In 15 cases dying from adherent pericarditis, reported by Musser of New Orleans, the diagnosis was missed in every one.

Pericarditis with adhesions is not as rare as text books on the heart would indicate. It is the cause of heart disease in about one case out of twenty. According to Willius, chronic pericarditis is the cause of heart trouble in 7% of the cases at the Mayo clinic. (He doesn't state whether these figures were clinical or pathological—probably the latter).

Chronic pericarditis is always the result of some form of acute fibrinous pericarditis, usually due to rheumatic infection of some kind. In the case here reported, the pericarditis was secondary to a tubercular pleurisy. Other etiological factors are pneumonia, aneurysm, nephritis and infarction of the myocardium.

The result of an acute pericarditis may be merely adhesions between the two layers of the pericardium, similar to an obliteration of the pleural cavity following pleurisy. As a rule, when pericarditis interferes with the work of the heart, there are not only adhesions between the two layers of the pericardium, but there are also adhesions to the surrounding structures. The outer layer of the pericardium becomes firmly adherent to the pleura, the spinal column, the diaphragm and, occasionally, to the anterior chest wall.

This diseased state has been given such names as chronic mediastino-pericarditis, callous pericarditis, concretio pericardii. When the heart is thus fixed by adhesions it is unable to rotate when it contracts and its work is increased with every systole by traction on the surrounding adhesions. This leads to hypertrophy and, ultimately, to loss of tone and dilatation. Heart failure may not occur for weeks, months or many years after adhesions form. Recognition of this form of heart disease depends solely on the clinical senses, as little or no aid is obtained from the x-ray or the electro-cardiograph. The most important items in diagnosis are as follows:

1. History of the case more important than any other one thing.

2. A history or personal knowledge of pericarditis; a history of pain in the chest that may be interpreted as being due to acute pericarditis; or a history of left sided pleurisy, pneumonia—or any disease that may be complicated by a pericarditis.

3. The symptoms and signs of heart failure without any other obvious cause. These may be (a) swelling of the feet, dyspnoea, cyanosis, swollen and tender liver or (b) recurrent ascites without any edema of the feet. (This when found is quite a significant symptom. "Picks Cirrhosis of the Liver.")

4. Age—When heart failure occurs in childhood pericarditis should be suspected. From this important rule alone, Paul White was able to diagnose a case where all the other clinicians failed.

5. Cardiac hypertrophy.

6. Inability to see or feel the apex beat.

7. Fixation of the borders of cardiac dullness when the patient changes his position—or on breathing.

8. Pulsus paradoxus — elimination or marked diminution of the pulse at the end of inspiration. (Such signs as systolic retraction of the intercostal spaces, Broadbent sign and inspiratory distention of the veins of the neck, are of little diagnostic value.)

The following is a case illustrating the typical clinical course and the usual post mortem findings in chronic mediastinopericarditis.

Tom L., a colored boy, 16 years old, admitted to the hospital November 16, 1926, complained of pain in the heart and in the left chest. There was no family history of tuberculosis or rheumatism. He was in bed for two weeks with influenza in 1921 and he had had sore throat once or twice in the past 7 years. Diseases of childhood, as well as rheumatism and chorea were denied. His present illness began rather suddenly in June, 1926 with pain in his left chest, shortness of breath and cough. In July, after running to a fire, he had considerable swelling of the feet for a few days (probably due to heart strain). In October he began to expectorate blood tinged sputum and had a few night sweats. On admission to the hospital, November 11, the usual findings were obtained of left sided pleurisy with effusion and displacement of the heart. The right border of cardiac dullness was 4 cm., to the right of the sternum. There was no edema nor any other sign of cardiac decompensation made out at this time. 1500 c.c., of straw colored fluid was aspirated from the left chest. A guinea pig was inoculated with negative results. The patient was discharged from the hospital December 13 considerably improved. Two weeks after leaving the hospital he began to get short of breath and the ankles became swollen. These symptoms became progressively worse, and he was re-admitted on January 11 on account of dyspnoea and dropsy. He was presented in the clinic January 21, 1927, and the diagnosis of mediastino pericarditis was made by correlating the important points in the clinical history and the physical findings. These were:

1. History of pleurisy with effusion with marked displacement of the heart that probably existed over a period of 5 months.

2. Symptoms and signs of heart failure such as orthopnoea; swelling of the feet; moderate ascites; enlarged, tender liver.

3. No physical findings obtained indicating tuberculosis of lungs. (Marked retraction of left chest from pleuritic adhesions, compensatory emphysema of right lung, a few subcrepitant rales over left upper lobe and over right base.)

4. Apex beat could neither be seen nor felt.

5. Fixation of heart—right border of dullness 3 cm., to the right of sternal border in 4th interspace. Border on left merged with dullness from thickened pleura. No change in percussion note on right cardiac border or above when patient changed position, or on breathing.

6. Pulsus paradoxus.

7. Subnormal temperature since admission, ten days before. Systolic retraction, Broadbent's sign, diastolic shock and inspiratory filling of the veins of the neck were looked for, but not found.

The pulse rate was from 82 to 116; blood pressure 100 over 80. The urine showed two plus albumin and some granular casts. Red blood cells 4,100,000, hemoglobin 81%, white blood cells 11,000. The Wassermann test was negative. Temperature was subnormal for two and a half weeks after admission, when he began to run an irregular temperature.

Little or no results were obtained from bed rest, digitalis and diuretics. Death occurred on March 14, 1927. The anatomical diagnosis by Dr. H. R. Wahl: "Chronic mediastino pericarditis and hyperplastic pleurisy (tubercular); hypertrophy and dilatation of the heart; encysted empyema on

left side; tubercular adenitis of mediastinal glands; chronic passive congestion of liver, kidneys and other viscera."

The autopsy showed in a very striking way that the cause of the heart failure was purely mechanical. The whole heart except the anterior surface of the right ventricle was encased in firm adhesions to the surrounding structures.

TREATMENT

The lack of response to the medicinal remedies in this case is explained by the autopsy. As the cause of the heart failure in all cases of this kind is the increased work of the heart—due to adhesions—the logical remedy should be some surgical procedure. This has been done a few times but, in my opinion, too seldom.

The first attempt to remove some of the mechanical factors in this disease was recommended by Brauer, a medical man, in 1902. Since then the operation has been performed enough times to establish it as a thoroughly justifiable procedure if the indications are definite. The operation named "cardiolysis" or the operation of Brauer, consists in the resection of two or three inches of the 3rd, 4th and 5th ribs and costal cartilages on the left side. The first case reported in this country was by Drs. J. E. Summers and A. D. Dunn of Omaha, in 1912. The diagnosis was made by Dunn, who recognized the indications for the operation; the rib resection by Summers. Although this operation has been done frequently in Europe, there have been less than twenty cases reported in the United States. No doubt, there have been many not recorded. A patient of mine (not reported) was operated on by Dr. George M. Gray in 1915 at St. Margarets Hospital Following the operation all the symptoms of heart failure disappeared and he did a moderate amount of work for four years. He then developed the symptoms of decompensation, returned to the hospital and died An autopsy showed massive pericardial adhesions.

Although there have been some failures, the results of the operation have been fairly good. According to J. E. Summers, "the operation is simple, the dangers slight and the results satisfactory." Read the article by Dr. Elsworth Smith. (Med. Clinics of North America, Nov., ,1920).

The good effects obtained by this operation can best be explained by the fact that formation of the window gives the hypertrophied heart more room. The indications for the operation do not depend upon whether or not there are adhesions to the anterior chest wall because this is the one place where adhesions are seldom found.

In the cardiolysis recommended by Schmieden, (Surg. Gyn. & Ob. Vol. 43.) the pericardial sac is not only freed from the adhesions to the surrounding structures, but the thickened pericardium is peeled from the heart muscle—especially from the left ventricle. Schmieden reports having operated upon seven patients, with one death. His patients were apparently in bad condition at the time of operation, as he states he did not remove the dropsical fluid from the serous cavities until after the operation. One patient was alive and working six years after the operation; one four years and two others two years. Such reports, if true, are encouraging.

In this form of heart disease it is obvious why medical treatment, except rest, does very little good. If this malady can be diagnosed with a fair degree of certainty and a careful, courageous surgeon (such as Dr. Gray) can be obtained, relief of the mechanical etiological factors by some surgical procedure is advisable. Such an operation would seem to be more logical than the operation for mitral stenosis or for angina pectoris—both of which are unscientific if not ridiculous.

Clinic of Sam H. Snider, M. D.

Department of Medicine

A CASE OF TUBERCULOSIS WITH SPONTANEOUS PNEUMOTHORAX

H. A. G., male, age 50, coal miner, was admitted to the Out-Patient Clinic of the Bell Memorial Hospital on March 4, 1927, complaining of pain in the left chest and shortness of breath. He dated his present illness from two months before when he had a sudden and severe pain in the left chest accompanied by dyspnoea. The attack came on while he was pushing some cars of coal in the mine. He has had a gradually diminishing pain in the left chest since that time and still has some pain in the left chest. The pain was quite severe, but did not radiate to the arm or shoulder. He locates it in the center of the left chest. There was no numbness and no tingling. He was not aware of his heart beat. Careful inquiry elicited the fact that he had been pushing nine cars of coal at the time of onset whereas four or five cars is the usual load for one man. He stated that he was exerting himself to the utmost at the time of onset of the pain, but that rest did not materially lessen the pain. Further in-

quiry brought out the fact that he had had pneumonia some five years previously; that he was ill about three weeks. He says that since he had pneumonia, he has coughed more or less and has lost several pounds of weight in the last year or two though he does not know how much. He has never coughed up blood. Has been more easily fatigued the last few months than previously.

Past personal history: General health good. Never ill except as mentioned in present illness. A moderate drinker, smokes, denies venereal infections and gives no history indicative of lues.

Family history: Father died of old age. Mother died of unknown cause. Patient is one of five children all of whom are living and well. There is no family history of tuberculosis and the patient has never, so far as he knows, been in intimate contact with a case of tuberculosis.

Physical examination: The patient looks older than his stated age, being apparently about 60. He looks somewhat anemic, but is fairly well nourished. Eyes are apparently normal, teeth are poor, some pyorrhea being present, and the teeth show some decay and several fillings. The chest examination is as follows: The left chest seems a little larger than the right and seems to bulge in the lower portion though no definite bulging of the intercostal spaces can be made out. The respiratory mobility is a little better on the right. Tactile fremitus is somewhat decreased throughout the left chest. The breath sounds are somewhat more distant throughout the left than on the corresponding areas of the right chest. A few persistent, medium rales are heard below the left clavicle. No rales heard in the right lung. The whispered voice is transmitted a little better throughout the right chest than on corresponding areas of the left chest. Heart dullness apparently normal. Sounds somewhat distant but clear. Blood pressure, 130-80. Abdomen: Apparently normal. Extremities: Negative.

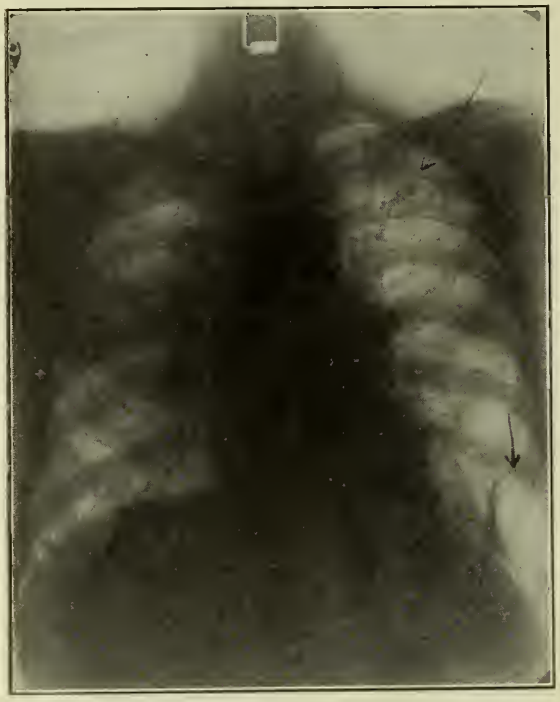
Discussion: Pain in the left chest of sudden onset and accompanied by severe dyspnoea is very suggestive of angina pectoris. The fact that the cardiac examination does not show evidence of pathological change would not be sufficient to exclude angina pectoris, but the history is not typical of angina pectoris. The attack of pain was continuous for some weeks, was not affected much if any by rest. There was no definite history of cardiac disability prior to the attack and the characteristic sequence of effort, pain, rest, relief was not present in this case.

The patient does have a definite history of cough preceding the attack, has lost weight, and has felt tired and weak. This at once suggests the possibility of pulmonary tuberculosis. The sudden, severe pain in the chest could have been due to pleurisy, but pleurisy seldom causes such a severe dyspnoea. The one incident which occasionally accompanies tuberculosis and which is characterized by severe pain in the chest accompanied by severe dyspnoea is spontaneous pneumothorax. This patient's history is characteristic of spontaneous pneumothorax. The fact that the pain lasted several weeks and only diminished gradually could easily be explained on that basis. The sudden collapse of the lung would induce a severe dyspnoea which would continue to some extent until the air in the pleural cavity was completely absorbed. Furthermore, he states that the pain began when he was indulging in unusual muscular exertion. Such is often the history of onset in pneumothorax. The closing of the glottis and the strain of the muscles of the abdomen combine to increase intra-pulmonic pressure to a great extent and during such exertion, rupture of an alveolus is likely to occur. The man's history pointing to tuberculous infection lends further support to the theory that he might have a spontaneous pneumothorax for the greater number of cases of spontaneous pneumothorax are found complicating pulmonary tuberculosis.

The physical examination of the chest is strongly suspicious of a pneumothorax which is almost completely absorbed. Two months has been adequate time for the absorption of most of the air in the pleural cavity provided the leakage from the lung has not continued. The slight bulging of the left chest, the slightly increased resonance throughout, the diminished tactile fremitus, and diminshed whispered voice all indicate an increased air content in this side of the chest, either within or without the lung. The rales below the left clavicle might be due to pleural friction, but being in the upper chest are more likely to be due to a lesion in the lung itself. Their presence indicats contact of parietal and visceral pleura at this point.

The patient was referred to the x-ray department for radiogram of the chest (the reduction of which is reproduced herewith.) The radiogram shows an exten-

sive tuberculous infiltration in the mid-portion of the right lung, a slight infiltration below the left clavicle and a small localized pocket of air in the pleural cavity in the left costo-diaphragmatic sinus. The left chest is larger than the right and the entire left lung somewhat more radiolucent. The radiogram was a bit surprising in showing a definitely encapsulated pocket



of air. We had expected to find a pneumothorax, but had expected that the slight amount of air present would be more evenly distributed.

It is quite reasonable to assume that there has been a generalized pneumothorax in this case as indicated by the extreme dyspnoea which is now greatly improved. As absorption took place, the lung re-expanded and made contact with the chest wall except in the costo-diaphragmatic sinus. The absorption is not yet complete and there is just sufficient air left to make positive proof of our clinical diagnosis.

The striking points in this case are the characteristic history of spontaneous pneumothorax including the history of tuberculous toxemia, the fairly characteristic, though not very definite, physical findings and the absence of rales over the extensive area of tuberculous infiltration on the right.

Spontaneous pneumothorax is not always due to tuberculosis, but tuberculosis should always be suspected in such cases. Had this patient been seen shortly after the onset of the pneumothorax and no rales heard on the right, it would not have been possible to state from the physical findings that he had tuberculosis for it is certain that shortly after the collapse of the left lung, the rales would not have been heard in the left upper. This case illustrates very well the fact that both physical and radiographic examinations of the chest should be made in every case in which tuberculosis of the lungs is suspected; for either method of examination may show evidence of disease in the absence of abnormal findings by the other method. Rales may occur in a tuberculous area where a calcium deposit is still so slight that it does not cast an abnormal shadow on the radiogram while much calcium in a tuberculous area may cast a dense shadow, but there may be so little moisture in the area that no rales are produced or the rales may be produced so far from the surface that they are not heard. So both methods of examination are essential for a complete diagnosis in a case of suspected tuberculosis. This case is reported because of its unusual nature and rather unusual features.

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Aloe's Removal

The well known surgical supply house of A. S. Aloe Company in St. Louis has been crowded out of their contracted quarters at 513 Olive Street, (the optical store remains there) and are now located in the new Aloe Surgical Building at 1819-23 Olive Street—only three blocks from the Union Station. The removal was necessitated by lack of downtown parking facilities and the growth of their surgical business which required larger and better quarters. Visiting physicians should take note of the new location near the railway center.

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The effects of dry air on bronchial moisture of asthma and that occurring in cardiac decompensation and in renal disease, were tested by Leas and his report of the results may be found in the Archives of Internal Medicine, April, 1927. The patients breathed through a jar containing anhydrous calcium chloride. The vital capacity was estimated before and after the patient breathed the dry air. In normal persons there was a slight increase in vital capacity, but in cases of cardiac decompensation the increase was marked and there was in the majority of cases a sense of subjective relief. In cases of asthma the results were varied.

THE JOURNAL
of The
Kansas Medical Society

W. E. McVEY, M.D. - - Editor

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THE ANNUAL MEETING

The Hutchinson meeting was a success. The attendance was not so large as was expected but reached 320 by noon of the last day. The uncertain weather and bad roads kept some at home who would otherwise have attended.

Whatever was lacking in attendance was made up in interest. The papers received unusual attention and certainly deserved it, for it was an excellent program.

The meeting of the House of Delegates on Tuesday evening was well attended. The reports of the officers were carefully considered and more than usual interest was shown in the Society's affairs. The plans outlined for the work of the Bureau of Public Relations met with approval and there were many very valuable suggestions made along the line of its functions.

In the discussion following the reports of the executive secretary of the Bureau and the chairman of the Legislative Committee it was suggested that the medical profession should be better represented in the next legislature than it has been for many years past. This suggestion was generally approved and an effort will be made to induce more medical men to become candidates for the legislature at the next election.

The annual election of officers occurred on Thursday morning and was an exceptionally tame affair. There were no contests and every officer received the unanimous vote of the House. Dr. John A. Dillon of Larned was made president-elect; Dr. J. B. Carter of Wilson was elected vice-president; Dr. George M. Gray, Kansas City, was re-elected treasurer. Councillors for the second, seventh and eighth districts were re-elected; Dr. C. W. Reynolds of Holton was elected councillor f or the first district and Dr. I. B. Parker of Hill City was elected councillor for the tenth district. There was no election of councillor for the ninth so that Dr. Kenney holds over.

The amendment to the constitution which was introduced a year ago was adopted. This provides for the election of a president-elect who becomes president on January 1 and holds that office for one year. It also provides for the election of one vice-president instead of three as heretofore. .

An amendment to the by-laws providing for a standing committee on Stormont Library was also adopted.

The treasurer presented a supplementary report showing the status of various funds on hand. From this report it appeared that the work outlined for the Society would cost more than the income from dues. The Society receives now $5.00 annually from each member, but $2.00 of this amount goes into the defense fund and can be used for no other purpose. For the year ending May 1, the Journal cost the Society sixty-seven and one-half cents per member. This leaves two dollars, thirty-two and one-half cents per member for the general expenses of the Society. This would probably meet the ordinary expenses of the Society, but at the Kansas City meeting the House of Delegates voted for the establishment of the Bureau of Public Relations, but no one was prepared at that time to estimate the probable cost to the Society and no special provision was made for that ex-

pense. The Bureau was established in August, 1926, and up to May 1, 1927, the total cost of operation was $1006.55. This amount was expended for clerk hire, stationery, printing and postage. The executive secretary received no pay for his services and asked for none. The first four months was mostly consumed in organization, but since January 1, a fairly well developed plan has been followed and the work of the Bureau considerably expanded. A short article is prepared, multigraphed and mailed, at this time, to 57 newspapers each week. Additional newspapers are added as requests for this service are received. A series of pamphlets, the first of which has already been printed and mailed, are being published at short intervals for circulation among the people. To supply the demand for these pamphlets, as indicated by the mailing lists sent in by the secretaries of county societies, will require from 25,000 to 30,000 copies of each issue. A very conservative estimate of the expense of conducting the Bureau for the next year was put at $2,500. The House of Delegates voted to appropriate for this purpose $200 per month. This will add one dollar and sixty cents per member to the expenses of the Society, estimated on the membership last year. On this basis the actual expense of the Society for this year, per member, will be $5.79 and it has an income of 5.00. The Society has an invested fund of a few thousand dollars which it will probably be necessary to draw upon until some arrangement is made to care for this added expense. There is no other state society that is doing so much for its members on so small an income.

Naturally it must be presumed that the members of the Society are willing to pay for what they want done, but according to our constitution the annual dues are limited to five dollars, and it is impossible to raise the dues until the constitution has been amended. A resolution to amend the constitution must lie over for one year before it can be acted upon, and because the annual meeting occurs in May and dues must be paid before February 30, it will be two years before any possible increase in dues can be available.

A resolution was introduced to amend the constitution, fixing the limit of dues at $10.00., and this resolution will be acted upon at the next annual meeting. This does not mean that the dues will be raised to ten dollars, for it is probable that a raise of one dollar on the present amount will be sufficient, but by making the limit for dues at ten dollars the House of Delegates will be able to fix the annual dues at whatever amount the needs of the Society require, within this limit, without the necessity of amending the constitution. It will permit the House of Delegates to do whatever in their judgment may be for the best interests of the Society and the profession.

The expense as it has been calculated is based on a membership of 1500. The expense connected with the Journal, the Bureau of Public Relations and the general running expenses of the Society would be slightly, if any more, with a membership of 2,000. Four hundred additional members would add $800 to the Defense Fund and $1,200 to the general fund and this amount would make up the estimated deficit for this year.

The officers of the State Society can, and have several times conducted campaigns for new members, but they cannot bring them into the Society. That can only be done by the county units. It is possible that the increased expenses of the Society can be provided for without an increase in annual dues if the county societies will reinstate all those who have dropped out and will secure the membership of all those eligible to membership.

There are excellent reasons for believing that there is a fairly large number of eligible men in the state that would like to join the Society if it were possible to do so. There are counties in the state in which there are societies that meet once a year, if they are fortunate enough to have a quorum on the day appointed for the meeting. Applications have been received by of-

ficers of the State Society from men in such counties, with the statement that they had been trying to join the county society, but as it held no meetings there was no opportunity to do so. According to our by-laws these men can only join the society in the county in which they live, except by consent of that society they may join an adjacent county society, if more convenient to their location. But the society which holds no meetings can hardly give such consent.

There are a good many eligible men in counties that have no organization, counties in which there are so few doctors that it is impossible to organize a society. In the western part of the state it seems impossible to group these counties so as to make even a multiple county organization practical.

Those men are needed in the Society and they should have an opportunity to join, if some plan can be arranged whereby it can be made possible.

The county unit plan of organization is not well adapted to conditions such as exist in this state, and is not entirely in harmony with the provisions of our charter which does not provide for a federation of county societies, but does provide for a state organization with county auxiliaries or branches wherever it is possible or desirable to have them. Membership should be obtained through the state society and the county auxiliaries made up of members of the state society. At least that is the only rational interpretation of the charter under which we are authorized to do business. A federation is perhaps ideal for a purely scientific society, but it lacks those cohesive qualities so necessary to an organization concerned in the economic welfare of its members. It would be possible under the plan provided in our charter to have auxiliaries in a number of counties that are now unorganized. It would promise greater success in the educational and legislative campaign the Society is now conducting if it could have a representative or an agent in every county in the state.

CHIPS

The care of the child's health in utero is as important to its physical well being as it is in the nine months or nine years of its life after it is born.

Plasmochin will soon supplant quinine in the treatment of malaria if the claim for it is true— that it is ten times as efficient as quinine and it is tasteless.

From the very many theories of the cause of hypertension one may take his choice and still have many things to explain. The experiments which have demonstrated that a fall in the blood pressure in the brain causes a vasoconstriction in the rest of the body, seem to strengthen the theory of Bordley and Baker that there is an association between persistent hypertension and arteriosclerosis of the vessels supplying the brain stem.

Recent experiments seem to confirm the opinion that the harmonic influence that controls the cyclic changes occurring in the female genital tract resides in the follicular extract and that the corpus luteum is probably an inhibitory factor. Parker and Bellerby have shown that the injection of folliculin during the early stages of pregnancy causes a reappearance of the cycle and a termination of the pregnancy. This also occurs in later stages of pragnancy but larger doses are required. It is thought that the persistent corpus luteum may be responsible for certain types of sterility and that these cases might be benefitted by the injection of folliculin.

From a study of the oxygen saturation of the arterial blood in a series of cases with cardiac dyspnoea, Fraser, (Lancet, March 12) concludes that cardiac dyspnoea is not due to deficiency of oxygen in the arterial blood nor to deficient oxygenation of the blood in the the lungs.

An exchange gives the following schoolboy's essay on Man: "Man is a compound of three parts, his cranium, his borax, and his abominable cavity. In his cranium are his brains if he has any. In his borax are his liver and his lights. In his abominable cavity are his vowels, five in number, a, e, i, o and u."

Proteal is the up-to-date treatment for drug addiction. It is the alkaloid derived from alfalfa and is said to be the chief ingredient in narcosan. It has been used by a number of physicians in the General

Hospital in Los Angeles. It is not claimed to be an antidote to narcotism nor a magic cure, but the results are said to be "gratifying."

In the Book of Daniel we are told that one Nebuchadnezzar, for his sin and debauchery, walked on all fours and ate grass like an ox for seven years. Perhaps it was the proteal in the alfalfa that restored him to his right mind.

There seems to be more than a temporary benefit derived from the administration of Lugol's solution in some cases of exophthalmic goiter. The maximum improvement is usually reached in from two to six weeks, then in some cases there is a relapse, but in some of them the improvement continues under smaller doses of the iodine. There are also cases in which the iodine seems to be dangerous. Cole in summing up his clinical experience in the Lancet, April 16, 1927, says: "An abnormally firm thyroid gland, exceptionally severe nervous symptoms, or loss of weight during the first few weeks of treatment are warnings that Lugol's iodine may be dangerous."

There are still a few people and a few doctors that have confidence in the prophylactic treatment for colds. If the individual who is vaccinated has no more colds during the season he is sure of its benefits, if on the other hand he has a very severe cold during the season he is just as sure that it is worthless; but that is a very poor kind of clinical evidence. Ferguson, Davey and Topley have reported the results of some tests conducted on a group of students and staff members at the University of Manchester. Of 286 people 138 were were immunized and 148 served as controls. There were 203 colds among the 138 inoculated persons, an average of 1.47 per person. There were 168 colds among the 148 uninoculated persons, an average of 1.14 per person. The average duration in the inoculated was 13 days and in the uninoculated was 10.7 days.

McCarrison reports the results of some experiments in which a form of goiter was produced in rats by a diet consisting largely of white flour. It is different from the forms of goiter now recognized. It is characterized by intense secretory hypertrophy which ultimately leads to exhaustion of more or less of the epithelia and its replacement by nonsecretory elements and fibrous tissue, without necessarily any enlargement of the gland. He thinks this form of goiter will be found sporadically among white flour eating people, and the subjects of its progressive stage will be prone to develop Graves' disease following fright, mental worry, pregnancy, lactation and attacks of infectious diseases; and that the subjects of its retrogressive stage will show more or less myxedema.

Williams, in an article on Intestinal Toxemias published in the Lancet April 30, says: "In cases of appendix peritontitis which showed the characteristic toxemia associated with "ileus," the effect of B *welchii* antitoxin was often very striking. Restlessness was greatly diminished or abolished, and the look of acute consciousness disappeared, so that patients slept easily; cyanosis when present disappeared; and in one case a definte icteric tinge faded rapidly. The pulse rate usually began to fall after administration of the serum, and the quality of the pulse improved. Abdominal distension often disappeared within a few hours after the administration of antitoxin and the patient after complaining of 'wind', began to evacuate the bowels spontaneously, in spite of previous failure of enemata and pituitary, though distension might not completely subside until convalescence was well established."

In an article on Hyperthyroidism and Iodine Medication published in the Archives of Internal Medicine, April, 1927, Starr says that in an examination of 125 patients with hyperthyroidism who had been given iodine, not a single instance of immediate increase in symptoms was found. On the other hand, under prolonged administration increasing symptoms were the rule, and postiodine reactions were common. If operation is to be performed, iodine should be administered for from ten to fourteen days, with the hope that a remission will occur, and it should be continued until the immediate effect of a subtotal thyroidectomy is complete. If iodine has been administered for a long time, it should be continued in order to prevent the postiodine reaction, or the administration may be stopped, the postiodine reaction allowed to pass and iodine again given in the hope that a remission will then take place. If a severe thyrotoxic crisis is present either before or after operation, relatively enormous doses of iodine are indicated.

In a discussion of the scientific and biological aspects of light treatment, Eidenow, London Lancet, March 1926, reported some experiments from which it was concluded

that irradiated skin did not differ from ordinary skin in its bactericidal value. The penetrative power of the rays was small so that the result could not depend upon the direct action upon the skin or on the blood or blood cells. The ultra-violet rays were bactericidal, but bacteria in blood or serum, when exposed to the rays cool, were entirely unaffected. The solution of the problem seemed to lie in the fact that an erythema dose of light will produce a fixed leucocytosis beneath the skin, and in the activation and absorption of the ergostearol present in skin and sweat glands. The skin rapidly becomes immune to ultra-violet rays and remains so until desquamation is completed and new skin is formed. If a maximum bactericidal effect is to be obtained the area exposed to the light should not be more than one-sixth of the total surface area. Serious results may follow large exposures in cases where the blood is impoverished as in septicemia. The area exposed is more important than the quantity of light. Failures may be due to the fact that the patient's skin is immune to the light.

Luncheon for Dr. Jabez Jackson

On Monday, May 30, the trustees of Christ's Hospital, Topeka, gave a complimentary luncheon to Dr. Jabez Jackson, who had been invited to deliver an address at the dedication ceremonies for the new hospital building held in connection with the graduation exercises of the training school. The members of the Shawnee County Society and a number of physicians from out of town were invited.

In his after dinner speech Dr. Jackson called attention to the development of the Middle West. He said in part:

"The West has progressed in medical science as much, if not more than in all other lines. The East is said to be the center of science. For the past generation Chicago has been the center. Young surgeons in the East are not given the opportunity to develop their own ideas and take responsibility as they are out in this part of the country. There was a time when young physicians went to Europe for study. Now the Middle Western medical colleges are equal if not superior to those of Europe. Post graduates go abroad only because of the clinical advantages. Over there a man has practically nothing to say about his operations if the authorities want someone to practice upon."

The out-of-town guests at the luncheon were:

Dr. S. J. Hampshire, Overbrook; Dr. O. F. Garlinghouse, Iola; Dr. John H. Cooper, Kansas City, Mo.; Dr. Charles C. Stillman, Morganville; Dr. E. C. Morgan, Clay Center; Dr. G. K. Janes, Williamsburg; Dr. H. J. Harker, Horton; Dr. Henry J. Deaver, Sabetha; Dr. Louis M. Tomlinson, Harveyville; Dr. J. Theron Hunter, Baltimore, Md.; Dr. A. E. Titus, Cottonwood Falls; Dr. T. E. Horner, Atchison; Dr. H. L. Chambers, Lawrence; Dr. J. E. Thompson, Huron; Dr. W. Y. Herrick, Wakeeny; Dr. George F. Brethour, Dwight.

SOCIETIES

FRANKLIN COUNTY

The Franlin County Medical Society met in regular monthly session in Chamber of Commerce rooms. Dinner was served at 6:30. During the dinner Miss Clemens of Hamilton, Kan., sang several solos. The wives of the members and visitors were present at the dinner and at its close they were entertained by the proprietor of the Pastime theatre, at a line party.

At the medical session Dr. W. J. Scott read a paper on "Heart Diseases in Infants and Children." A spirited discussion followed. Out of town men present were Dr. N. E. Naylor of Wellsville, Drs. Speer, Douglass; Carmichael, Dietz; Forman and Jarnicke, of Osawatomie; Dr. G. K. Janes of Williamsburg, and Dr. S. D. E. Woods of Princeton.

Dr. Woods was elected delegate to the state medical convention which meets in Hutchinson. Dr. G. W. Davis was elected alternate.

Dr. Scott's paper entered into various diseases that may affect the heart in childhood, discussing the varieties, their pathology, symptomatology and causes.

STAFFORD COUNTY

Society met in St. John at 3:00 p. m. Wednesday, May 11th, with the following members present: J. J. Tretbar, T. W. Scott, W. L. Butler, Stafford; M. M. Hart, Macksville; L. E. Mock, J. T. Scott, St. John. Due to sickness in his family Dr. Major of Kansas City was unable to be present and the session was devoted to a discussion of the letter by Mr. O. O. John, in reply to a Chiropractic advertisement that appeared in the local newspapers. It was moved and carried that the Secretary be instructed to forward this letter to the Kansas Medical Journal for publication and that 1000 reprints be ordered for the

Society. It was also decided to change the hour of meeting on the second Wednesday in June to 3:00 p. m. This meeting will be held in Dr. J. T. Scott's office and by request he will read a paper on "Diet—What to Eat and Why." Refreshments will be served by the wives of the St. John physicians at the conclusion of the program.

J. T. Scott, Secretary.

SEDGWICK COUNTY

The Sedgwick County Medical Society held its May monthly clinic at the Wesley Hospital on May 17.

The attendance was very gratifying, between 25 and 30 physicians from Southern Kansas and Northern Oklahoma visited the clinic and apparently very well .pleased. The surgical clinic started at 9 a. m., followed by a luncheon at 12:30, the medical and special clinics filled the entire afternoon. At 6:30 p. m. a dinner was held in the Grill Room, Lassen Hotel, followed by the program of the evening:

Enterostomy in Acute Abdominal Infections, Dr. C. H. Briggs.

Pathological Lesions of the Uterine Cervix, Dr. W. P. Callahan.

The next monthly Clinic will be held at Wichita Hospital, Tuesday, June 21, 1927. The entire day will be filled with medical, surgical and specialty clinics at the hospital. A good medical program will be given in the evening.

Lunch will be provided for the visiting guests.

W. J. Eilerts, Secretary.

KANSAS MEDICAL AUXILIARY

At a recent meeting of the Kansas Medical Auxiliary the folowing resolutions were adopted:

The Kansas Medical Auxiliary herein assembled submit the following:

Resolved: That we extend to Dr. Earle G. Brown our thanks and appreciation for the address given before our organization.

2 That we extend to Dr. McVey our thanks and appreciation for the space allowed us in the Kansas State Journal.

3 That we extend to Dr. Hassig our thanks and appreciation for the space allowed us in the programs.

4 That we extend to the ladies of Hutchinson, who have so graciously entertained us, our sincere thanks and appreciation for the many courtesies.

Be it further resolved: That we pause for a moment in a tribute of sympathy to the members of our Auxiliary whose husbands have been taken from them during the past year:

Mrs. B. F. Morgan, Clay Center,
Mrs. J. D. Riddell, Salina,
Mrs. E. W. Daniels, Beloit,
Mrs. D. R. Stoner, Ellis.

Be it further resolved: That we express the loss we feel in the death of our fellow-member and co-worker, Mrs. A. J. Seager, Beloit.

Respectfully submitted,
Mrs. P. W. Beckman
Mrs. C. R. Lytle.

MEDICAL SOCIETY OF THE MISSOURI VALLEY

This Society was founded in 1888 by Dr. Donald Macrae, Sr., of Council Bluffs, Ia. It now has more than 500 members in the states of Iowa, Kansas, Missouri, Nebraska and South Dakota. During the present year the Society is being reorganized with the object of making it more of a teaching organization. There are seven medical schools in this district that should furnish sufficiently abundant new material to make this one of the most worth while societies in America. At the coming meeting in Des Moines, September 14th, 15th and 16th, representatives from all of these medical schools will have a place on the program in addition to several local and nationally prominent men. Dr. Thomas G. Orr, President, Dr. Charles Wood Fassett, Secretary, Dr. Donald Macrae, Chairman of the Executive Committee.

In Statu Quo—?

BY THE PRODIGAL

Some issues ago of this Journal, I reported a case of hemiplegia, which was later complicated with neuritis of the brachial plexus. The paralyzed side has been restored, in a great measure, and the neuritis ceased as gradually as it came on. In addition to the treatment by drugs, diet and rest, diathermy and the other thermies were used and heat by light, called radiant heat, the latter giving the greatest temporary relief. Diathermy was spoken of as a dangerous agent. The statement was based on my limited observation in the one case and on the findings of Dr. G. Bettman Massey in his book "Practical Electro-Theurapeutics and Diathermy," (1924) and seemingly confirmed by Dr. C. W. Sampson in his book, "A Practice of Physiotherapy"" (1926). On page 102 of Dr. Massey's book he reports cooking a chunk of beefsteak overdone in the center by diathermy,

while the outside of the steak was yet rare. These authors make the point that diathermy will increase heat in the deep structures and organs in the body and damage the tissue, while the surface of the body would not be injuriously affected. Dr. S. Bettman and Crohn of Chicago (Jr. A. M. A., Feb. 27, 1927) say they were not able to get any such results. That heat applied in any other form produced the same effect.

The implication is that the application of heat for the relief of congestion or inflammation or pain in an internal organ or deep structure in the body, by diathermy is of no more value as a therapeutic agent than external heat applied in any other way.

The testimony of Dr. Lonergan in a synoptic report on page 958 of the March 19th, 1924, Journal of the A. M. A., confirms the latter report. However, Dr. Lonergan says diathermy is a form of electrical energy that is not well understood. It is a powerful agent, apparently capable of causing gross injury and by virtue of this fact must be used with caution. The indiscriminate use of diathermy is to be discouraged. Such evidence put before a jury in a criminal case would result in a hung jury.

The testimony of Dr. S. Bettman and Crohn proves that there would be no more danger of injuring the deep structures in the body by using diathermy than there is in the use of the hot water bottle, electric pad or poultices, and the therapeutic effect would be the same. There is a suggestive doubt in the mind of Dr. Lonergan's conclusions respecting the findings of Bettman and Crohn as to the effect of diathermy and he cautions safety first.

There are competent physicians treating pneumonia, and disease of other internal organs, more successfully by diathermy than they were ever able to do by the external application of heat or other tried remedial therapeutic agents. It may be that their success is due to the mental effect upon the patient, caused by the apparatus used in the application mystifying the patient, and the confidence of the physician in the agent used, thus producing a telepathic tonic, curative, cumulative, happy result. However, I am persuaded that ther is more therapeutic virtue in diathermy (although I failed to get results) than in heat applied in other forms or in the suggestive effect, and if I was in practice, I would try diathermy out—with caution. For as suggested by Dr. Lonergan, diathermy is not well understood and it is a powerful agent for evil (or for good), depending upon the knowledge of the physician in selecting the case and in applying the remedy.

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MEDICAL SCHOOL NOTES

Dr. H. L. Dwyer will attend the meeting of the American Association of Medical Milk Commissions in Washington, May 16-17, as a delegate of the Medical Milk Commission of the Jackson County Medical Society.

Dr. Donald R. Black addressed the Girl's Health Club at the Paseo High School on the subject, "Heart Disease as a Public Health Problem," on April 21.

Dr. Richard L. Sutton was the guest of the Pettis County Medical Society at Sedalia on April 21st. In addition to speaking at a noon luncheon, and a banquet in the evening, he held a clinic, and gave a lantern slide lecture in the afternoon, and at night a travel lecture in the high school auditorium.

Dr. Albert S. Welch read a paper on "Suppurative Pericarditis" at the Missouri State Medical Meeting, at Sedalia, May 4th.

Dr. Richard Sutton was the guest at the annual meeting of the Guthrie County Medical Society at Enid, Oklahoma, on April 16th.

Dr. Thomas G. Orr, talked on "Intestinal Obstruction, Experimental and Clinical" before the Polk County Medical Society, April 26th.

Dr. E. C. Padgett talked on "Treatment of Carcinoma of the Face, Mouth and Jaws" and Dr. Roy F. Mills talked on "Prevention of Heart Disease" before the Jackson County Medical Society, April 26th.

Dr. Damon Walthall talked on "Scrotal Tumor in the New Born" and gave a lantern slide demonstration before the Jackson County Medical Society April 19. Dr. J. B. Cowherd also talked at this meeting and gave a lantern slide demonstration on "Enlarged Thymus in the New Born."

Dr. A. L. Skoog will read a paper on "Cerebro-spinal Fluid in Epilepsy" at the meeting of the National Association for Study of Epilepsy, in Cincinnati, May 30-31.

Many members of the University of Kansas Medical School Faculty attended the meetings of the Kansas State Medical Society and the Missouri State Medical So-

ciety held in Hutchinson, Kansas and Sedalia, Missouri.

Dr. E. T. Gibson spoke on "The Status of the Mental Hygiene Movement in Kansas City," at the annual meeting of the Kansas Mental Hygiene Society, May 19th.

BOOKS

Mineral Waters of the United States and American Spas by William Edward Fitch, M.D. Published by Lea and Febiger, Philadelphia and New York. Price $8.50.

The object of this work the author states to be "to awaken the profession to a realization of the importance of our American mineral water resources, their great therapeutic value in the treatment of chronic diseases and to encourage a more thorough understanding of the subject of medical hydrology." Descriptions of location and analysis of water are given for over 800 springs, including eleven mineral springs in Kansas. These are Abilene Wells, Arrington Mineral Springs, Baxter Springs, Blaising Natural Mineral Springs, Bonner's Springs, Geuda Springs, Lincoln County Springs, Rockhart Mineral Springs, Sycamore Springs, Sun Springs and Waconda Springs.

The Diseases of Infants and Children by J. P. Crozer Griffith, M.D., Ph. D., Professor of Pediatrics in the Graduate School of Medicine of the University of Pennsylvania, and A. Graeme Mitchell, M.D., Professor of Pediatrics, College of Medicine, University of Cincinnati. Second Edition, Reset. Two octavo volumes totaling 1715 pages with 461 illustrations, including 20 plates in colors. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $20.00 net.

Most everyone is familiar with the first edition of the work by Griffith. In its revision Dr. A. Graeme Mitchell has assisted the original author and together they have produced a comprehensive textbook. Very many changes have been made and much of the old text has been completely rewritten. The first volume deals with general subjects and with disease of the newborn. The second volume covers diseases of the digetive, respiratory, circulatory, genitourinary and nervous systems; diseases of muscles, bones, joints, blood, spleen, lymph; the internal secretions; diseases of the skin, eye and ear.

Health Supervision and Medical Inspection of Schools. Thomas D. Wood, M.D., College Physician, Adviser in Health Education, and Professor of Physical Education, Teachers College, Columbia University, and Hugh G. Rowell, M.D., Physician to the Horace Mann Schools, Lecturer and Assistant Physician, Teachers College, Columbia University. Octavo of 637 pages with 243 illustrations. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $7.50 net.

This is an exhaustive work on the subject of school health supervision, in which every detail of the duties of those concerned is carefully explained. Report forms, record forms, notices, charts, etc., of numerous and varied kinds are reproduced. Methods of diagnosis and prescriptions for the treatment of various maladies are also given. School construction and sanitation are discussed in full. Even the health supervision and care of the pre-school child is given a chapter.

The Modern Practice of Pediatrics by William Palmer Lucas, M.D., Professor of Pediatrics, University of California Medical School, etc. Published by The Macmillan Company, New York.

The author stresses the importance of preventive pediatrics. He discusses the importance of the prenatal period and gives some observations on the normal development of the newborn and its pathology. The hygiene of infancy is given an important place. He describes the physiology of digestion and the metabolism of fats, carbohydrates, proteins, salts and water. All of the important considerations in the nutrition of the child are discussed. The diseases of childhood are taken up in regular order with the symptoms and treatment. There are some very excellent illustrations.

Physicians of the Mayo Clinic and Mayo Foundation. A series of 635 biographical sketches with 611 portraits and including complete and accurate data concerning the professional life of each physician prior to January 1, 1926. Octavo volume of 578 pages. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $7.00.

In this volume will be found complete and accurate data concerning the professional life of each physician who has been officially connected with the Mayo Clinic or the Mayo Foundation for a period of one year or more prior to January 1926. These little sketches with the photo of each of the men connected with the Mayo Clinic will no doubt be of interest to a great many who are in any way interested in or familiar with that institution.

International Clinics, a quarterly of illustrated clinical lectures and especially prepared original articles edited by Henry W. Cattell, M.D. Volume 1, Thirty-seventh Series 1927. Published by J. B. Lippincott Company, Philadlphia.

Among the articles in this volume that the general practitioner will be particularly interested in are: Problems of Paresis by Oswald Bumke Common digestive syndromes in cardiovascular disease by Percy B. Davidson; the medical treatment of uncomplicated gastric ulcer by Rene A. Gut-



The Diagnostic Department of Research Hospital

23rd & Holmes Sts., Kansas City, Mo.

The Diagnostic Department of Research Hospital was established in November 1924. Patients are received for diagnosis from reputable physicians. On completion of examinations, reports, which include the patient's history, physical examination, laboratory and x-ray reports, the findings of various specialists and the final diagnosis with recommendations for treatment, are sent to the patient's physician—in no instance will reports be given to patients. The fee includes all necessary tests and examinations. The following Departments are represented:—

Medicine, Surgery, Orthopedics, Neurology, Oto-Rhino-Laryngology, Ophthalmology, Urology, Dermatology, Gynecology, Obstetrics, Radiology, Pathology, and Electrocardiography.

For further information address:

THE DIAGNOSTIC DEPARTMENT OF RESEARCH HOSPITAL
23rd and Holmes Sts., Kansas City, Mo.

Grandview Sanitarium

KANSAS CITY, KANSAS

The Grandview Sanitarium was completely destroyed by fire. Fifteen years active work in the sanitarium business enabled us to know our needs for the future. We have planned, built and completed what we believe to be an ideal place and are open and ready for business. Thanking our friends for their patronage in the past and assuring you we are prepared to give as good service as can be had in any sanitarium, we remain,

Very truly yours,

E. F. De VILBISS, M. D.,
Superintendent.

Office 917 Rialto Bldg., Kansas City, Mo.

mann different forms of arteritis by Francis Harbitz. Under the head of surgery will be found the report of a clinic at Johns Hopkins Hospital by Dean Lewis; biliary surgery by W. Wayne Babcock; a series of cases by Brooke M. Anspach; thoracoplasty by Sauerbruch; types of anal and rectal cancer by Chas. M. Drueck.

A Textbook of Clinical Neurology. By Israel S. Wechsler, M.D., Assistant Professor of Clinical Neurology, Columbia University, New York; Attending Neurologist, The Montefiore Hospital, New York. Octavo volume of 725 pages with 127 illustrations. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $7.00.

On casual review of this book one is first impressed by the lucid descriptions of the various conditions discussed. The author seems very clear in his pathology and makes the character and development of the disease process present themselves as logical conclusions. This is a textbook on neurology that the general practitioner can read with satisfaction and benefit.

Nursing Mental and Nervous Diseases, a textbook for use in schools for the training of nurses, by Albert Coulson Buckley, M.D. Published by J. B. Lippincott Co. Philadelphia.

The author believes that a definite kind of nursing care is required in cases that are nervously and mentally ill. He calls attention to the needs and modes of management of the mental patient from the standpoints of administration of food, the securing of sleep and the elimination of waste. He describes the common acute and chronic nervous maladies and lays particular stress upon the symptoms.

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Tetanus

It is becoming easier than ever before to give a child a hypodermic of Tetanus Antitoxin, now that this biological product has been purified and concentrated to such an extent that 1500 units (the prophylactic dose) resembles nothing so much as a few drops of pure water. Vast improvements have been made in the physical properties of Tetanus Antitoxin since the product was first made available to the profession, and with this improvement in form has gone a constantly increasing use in caring for suspicious wounds.

Doses as high as 20,000 units, for treatment, are now offered, in a volume no larger than that of the 10,000-unit dose of a few years ago; and from this point down to a 3000-unit dose.

See the advertisement in this issue headed "Tetanus Antitoxin (P. D. & Co.) —Potent, Refined, Concentrated." It will well repay perusal.

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A Scene in "Lost River Valley"

French Lick Springs Hotel, Indiana, is now in mid-season, with horseback riding, golf, and other recreations vying with each other in popularity. Many visitors go to French Lick for the mineral waters that abound there in the region so well known as the "Lost River Valley." It is a picturesque as well as an historical section about which books have been written. But the healthful climate and the mineral waters continue to be the chief attraction for thousands of visitors each year. The beautiful gardens and surroundings of French Lick Springs Hotel bespeak the peaceful and healthful atmosphere which prevails there. The percentage of illness is considerably less there than in other cities, towns and villages of Indiana. Still the authorities provide for those who may be sick. Dr. A. H. Harold, an experienced physician of Indianapolis, has recently accepted the position as Medical Director at French Lick Springs Hotel.

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"I say, doctor, did you ever doctor another doctor?"

"Oh, yes."

"Well, tell me this: Does a doctor doctor a doctor the way the doctored doctor wants to be doctored, or does the doctor doing the doctoring doctor the other doctor in his own way?"—Outlook.

LOCATION WANTED—For general practice in Kansas, preferably in north eastern section. Location to be modern county seat town with hospital affiliation accessible. Want office rooms with heat, light and water. Prefer prosperous community where an efficient physician is really needed. Will install x-ray machine, laboratory equipment and other diagnostic and therapeutic appliances. Will purchase for cash desirable 5 or 6 room house. Services available in August or September. Am resident of central Kansas and can make immediate personal investigation of any desirable opening.—C. K., care Journal.

WANTED—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

WANTED TO BUY — Ten-inch X-Ray transformer. Must be guaranteed. Coolidge equipment unnecessary. P. O. Box No. 217, Kinsley, Kansas.

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Report of the Kansas State Necrology Committee for the Current Year.

ELMER E. LIGGETT, M.D., Chairman, Oswego

Read at sixty-first annual meeting of the Kansas Medical Society, at Hutchinson, May 3, 4, 5, 1927.

Since our last report at the Kansas City meeting in 1926, the Necrology Committee has received information as to the deaths of fifty-three physicians in Kansas, occurring between the dates of April 16, 1926 and April 15, 1927 inclusive. This information was obtained from the Journal of the Kansas Medical Society, the Journal of the American Medical Association, from obituary notices in newspapers, from correspondence with the secretaries of the county societies, from other physicians in the communities in which the deaths occurred, and from the Secretary of the State Board of Health.

Of the sixty-one organized local societies, eighteen report no deaths, eighteen societies report thirty-deaths, twenty-five make no report, but from sources other than the county secretaries it was learned that in twelve of these twenty-five not reporting, there was a total of eighteen deaths. In the unorganized districts there were four deaths, making a total throughout the State of fifty-two.

Following the rule of adding two per cent to the number of deaths reported on account of delayed reports and possible ommissions, we may estimate the total number of deaths for the year at fifty-four.

According to the 1925 edition of the American Medical Directory there are two thousand three hundred and sixty-four physicians in Kansas. Thus these fifty-four deaths are equivalent to twenty-three and twenty-two hundredths per thousand. The Kansas State Board of Health reports that the percentage among the people throughout the state for the year 1926 is 10.5%, a lower rate by 12.72% than among the physicians this year. According to the Journal of the American Medical Association the annual death rate among physicians in the United States for 1925 was seventeen and twenty-two hundredths per thousand. The annual death rate for 1926 is not available, but the average annual death rate of physicians for the last twenty-four years is seventeen and eight hundredths per thousand. Therefore, it will be seen that our death rate among the physicians of the State for this year is higher than it was last year by about four per thousand, and is considerably higher than the average throughout the United States.

For the last six years of which we have a fairly complete record the average rate has been nineteen and seventy-six hundredths per thousand in Kansas and this year it exceeds that by four.

Of the fifty-two deaths reported twenty-nine were members of the State Society, eighteen were not members and the status of five was not given. Thirty-nine were in active practice and thirteen were retired.

The ages of death of the forty-nine whose ages were stated varied from thirty-six to ninety-three. None was under thirty years of age, two died between the ages of thirty and thirty-nine inclusive, eight died between the ages of forty and forty-nine inclusive, eight died between the ages of fifty and fifty-nine, eleven died between sixty and sixty-nine, fourteen died between seventy and seventy-nine, four between the ages of eighty and eighty-nine and two were over ninety.

The cause of death was not given in two instances. Of the fifty in which the cause of death was given cerebral hemorrhage caused eight deaths, heart disease, including five cases of angina pectoris, three of arterio-sclerosis and one each of aortic insufficiency and malignant endorcarditis, caused seventeen deaths. Carcinoma caused four deaths. Senility and nephritis three each. Pulmonary tuberculosis two. Rupture of the esophagus, abscess of the lungs, pneumonia, streptococcic sore throat, peritonitis, acute gastro-enteritis, meningitis, pernicious anemia, pseudo leukemia, sarcoma, brain tumor, insanity and an overdose of morphine each caused one death.

The shortest length of time from graduation was ten years, the longest sixty-nine. Of the fifty-two decedents forty-seven were graduates in medicine, four were non-graduates and the status of one was not given. All were licensed to practice in Kansas. None had practiced less than ten years,

nine had practiced more than ten and less than twenty, fifteen had practiced from twenty to thirty years, nine from thirty to forty years, eleven from forty to fifty years, five from fifty to sixty years and one had practiced more than sixty years, or had been graduated more than sixty years, he may have been retired.

The dates of death per months were as follows. Three occurred in the last half of April, 1926, five occurred in May, one in June, five in July, four in August, three in September, six in October, three in November, three in December, four in January, nine in February, five in March and one in the first half of April 1927.

It will be seen that the mortality was greatest in February when nine occurred. Cardio-vascular disease including cerebral hemorrhage caused twenty-six deaths, much exceeding in number any other systemic ailment. Carcinoma caused four deaths. Nephritic ailments came next with three deaths and tuberculosis caused two. There were no deaths from automobile accidents this year.

Positions of honor and trust held both as citizens and practitioners of medicine were varied. Many were Masons, several were Knights Templar. One belonged to an honorary medical fraternity. Two had been druggists, one was a railroad surgeon. Two had taught school. One was a minister. One had served on the School Board of his town. Three had been on their City Councils. Three had been mayors of their respective cities. One had been post master. One had been Register of Deeds. One a member of the State Legislature. One had been on the City Board of Health. One had been Coroner. Three had been County Health Officers. Two had been Pension Examiners. Two had been in the Indian Service. One had been a Pony Express rider. One was a Civil War veteran. Four were Medical Officers in the World War, two being overseas men. One had been in the Volunteer Medical Service Corps, one on the Council of National Defense. One had been Chief Surgeon of the Kansas Soldiers Home, Dodge City. One had been Assistant Surgeon at the National Military Home, Leavenworth, and one had been an Assistant at the Osawatomie State Hospital. Two had held all the offices in their county societies. One had been a Professor of Obstetrics in the Kansas University Medical School, Rosedale. One was Councilor for the Seventh District. One was President of the State Society. Two were members of the American College of Surgeons.

DELAYED REPORTS FROM THE YEAR 1926

1. THOMAS CARTER BURTON, Hoisington, aged 59, died of paralysis March 15, 1926. He was graduated from the Eclectic Medical Institute, Cincinnati, 1897. Was a member of the Barton County and State Societies.

2. THOMAS F. CLARK, Belpre, aged 83, died of paralysis, March 6, 1926. He was not a graduate of a medical school but was licensed in 1901. Was not a member of the State Society.

3. HARRISON DIXON COOPER, Dexter, aged 68, died of apoplexy March 15, 1926. He was not a graduate of a medical school but was licensed 1901. Was not a member of the State Society.

4. CHARLES A. FORSYTHE, Kincaid, aged 49, died of heart disease April 15, 1926. He was graduated from the College of Physicians and Surgeons, Keokuk, 1908. He was a member of the County and State Societies, and of the American Medical Association.

5. THOMAS SMITH GREER, Edgerton aged 65, died April 2, 1926, at the Christian Church Hospital, Kansas City, following an operation for duodenal ulcer. He was graduated from the University Medical College, Kansas City, 1897. Was a member of the State Society and a Fellow of the American Medical Association.

6. ABRAHAM L. HOLLOWAY, Hutchinson, aged 68, died of interstitial nephritis April 15, 1926. He was graduated from the Bennett Medical College, Chicago, 1878. He was not a member of the State Society or the American Medical Association.

7. EDWARD O. SMITH, Winfield, aged 57, died of myocarditis April 13, 1926. He was graduated from the Keokuk Medical College 1895. Was a member of the Cowley County and State Societies and a Fellow of the American Medical Association.

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1. THOMAS D. ACHOR, Emporia, aged 83, died of heart disease Jan. 2, 1927. He was graduated from Ohio Medical School, Cincinnati, 1873. Had been a County Health officer. Was retired but had formerly been a member of the State Society.

2. GEORGE PARSONS BELL, Ulysses, aged 67, died of apoplexy, July 8, 1926. He was graduated from the Bellevue Hospital Medical College, 1886. He had been Coroner at Chatam, Indian Territory, Postmaster at Mineral and Corona, Kansas, and a

Pension Examiner at Columbus, Kansas. He was a member of the State Society and American Medical Association.

3. ANDREW BENNIE, Almena, aged 68, died December 21, 1926, of rupture of the esophagus, at the Norton Methodist Hospital. He was graduated from the University of Nebraska College of Medicine, Lincoln, 1885. In time of service was one of the oldest physicians in Northeast Kansas. Was a member of the State Society and the American Medical Association.

4. FREDERICK OTTO BLAINE, Copeland, died following a long illness (self-starvation) July 11, 1926, at St. Anthony's Hospital, Dodge City. He was graduated from the Medico-Chirurgical College, Kansas City, 1903. He was not a member of the State Society or the American Medical Association.

5. WARREN D. BLATCHLEY, Fort Scott, aged 77, died of angina pectoris, March 22, 1927. He was graduated from the Physio-Medical Institute, 1877. He was a salesman of medical books and not in practice for many years. Was not a member of the State Society or American Medical Association.

6. CHARLES EDWIN BOWERS, Wichita, aged 71, died of carcinoma of the stomach, March 23, 1927. He was graduated from the Rush Medical College, Chicago, 1883. He was on the staff of the St. Francis Hospital and formerly chief surgeon there. He read the first paper, 1905, calling attention to the supra-pubic operation for removal of the prostate. He was a Knight Templar. Was a member of the County, State, Western Surgical Societies, and the American Medical Association. He was a fellow and first year member of the American College of Surgeons, and took an active interest in it.

7. JOHN JOSEPH BRADY, Frankfort, aged 68, died of apoplexy, September 4, 1926. He was a graduate of the Kansas City Homeopathic Medical College, 1896. He was Frankfort's oldest physician, having practiced there twenty-five years. He was a member of the State Society and a Fellow of the American Medical Association.

8. WILLIAM CLIFFORD BRASHEAR, Hutchinson, aged 48, died of abscess of the lungs, January 24, 1927. He was graduated from the Hahnemann Medical School, Kansas City, 1908. He was not a member of the State Society.

9. HENRY A. BROWN, Iola, aged 75, died of apoplexy, August 30, 1926. He was not a graduate of a medical school but was licensed in 1902, and had practiced in Iola since 1907. Was a member of the State Society and American Medical Association.

10. WILLIAM EVERETT CAREY, colored, Nicodemus, aged 51, died in February, 1927. He was graduated from the Louisville National Medical College, 1905. Had formerly practiced at Russell Springs and Ft. Scott. He was a member of the Central Kansas and State Societies.

11. JAMES WILLIAM CAVE, Wichita, aged 59, died of heart block, April 26, 1926. He was graduated from Louisville, Kentucky School of Medicine, 1892. He was a member of the State Society and a Fellow of the American Medical Association.

12. C. FREMONT CRONK, Wichita, aged 65, died after a years' illness of nephritis, October 20, 1926. He was graduated from the Rush Medical College, Chicago, 1891. He served as a Captain in the Medical Corps during the World War. Was a member of the State Society and the American Medical Association.

13. EDMUND N. DANIELS, Beloit, aged 56, died of angina pectoris, July 21, 1926. Was graduated from the University Medical College, Kansas City, 1900. Was on the staff of the Beloit Hospital. He was a member of the State Society and a Fellow of the American Medical Association.

14. JOHN W. DE MAND, Kansas City, Kansas, aged 73, died of cerebral hemorrhage, July 1, 1926. He was graduated from the Eclectic Medical College, 1902. Before retiring two years ago had practiced at Lincolnville. He was a minister of the Methodist Church forty-six years, having served eighteen years as District Superintendent and ten years as Secretary of the Conference.

15. MILTON HENRY DE MAND, Haven, aged 43, died of pneumonia at a hospital in Wichita, July 28, 1926. He was graduated from the University of Kansas School of Medicine, Rosedale, 1912, and had spent a year at Berlin in post-graduate work. He was a member of the County and State Societies, and a Fellow of the American Medical Association.

16. JOHN CORNELIUS ENTZ, Salina, aged 54, died of pernicious anemia, February 7, 1927. He was graduated from the Kansas City College of Pharmacy, 1893, and the Eclectic Medical College, Cincinnati, 1896. He had been a Director of the School Board and Mayor of Hope. He was a member of the Volunteer Medical Service Corps and of the Council of National de-

fense during the World War. He was not a member of the State Society or American Medical Association.

17. EMIL T. ERICKSON, Cambridge, aged 43, died November 22, 1926, of peritonitis following an operation for gall-bladder. He was a graduate of the University of Kansas School of Medicine, Rosedale, 1908. Was a member of the State Society and a Fellow of the American Medical Association.

18. FRANK H. ERWIN, Morril, aged 66, died of myocarditis, October 11, 1926. He was graduated from the College of Louisville, Kentucky, 1882. Was a member of the State Society and the American Medical Association.

19. GEORGE H. EWIN, Lawrence, aged 58, died February 6, 1927, at the Topeka State Hospital of cerebral arterio-sclerosis.

20. EMILY STATELLA FLUESMIER FAIRCHILD, Osawatomie, aged 53, died of aortic insufficiency, February 13, 1927. She was graduated from the Barnes Medical College, St. Louis, 1908. Specialized in Ophthamology. Formerly practiced at Fall River. Was a member of the Miami County and State Societies and of the American Medical Association.

21. WILLIAM ABEL FARR, Miltonvale, aged 55, died at Long Beach, Calif., of arterio-sclerosis and nephritis, October 3, 1926. He was graduated from the University Medical College, Kansas City, 1898. He was not a member of the State Society.

22. MELVIN NEWTON GARDNER, Greenleaf, aged 70, died of angina pectoris, April 6, 1927. He was graduated from the University of Michigan Medical School, Ann Arbor, 1883. Had practiced in Greenleaf many years, and was formerly a member of the County and State Societies and a fellow of the American Medical Association.

23. ABRAHAM S. GISH, Abilene, aged 82, died of cerebral hemorrhage, April 25, 1926. He was graduated from the Eclectic Medical College of Pennsylvania, 1869. He was not a member of the State Society or the American Medical Association.

24. WILLIAM BELL GODDARD, Topeka, aged 37, died August 31, 1927, of meningitis, staphylococcus and cavernous sinus thrombosis fascial and orbital cellulitis. He was graduated from the Vanderbilt University Medical School, 1916. Was a member of the honorary medical fraternity Alpha Omega Alpha. Had been recently on the house staff of the New York Skin and Cancer Hospital. He was a World war overseas veteran. Was a member of the Shawnee County, State, Northeast Kansas and Golden Belt Medical Societies, and a fellow of the American Medical Association.

25. HENRY M. HALL, Lincoln ,aged 91, died of senility, March 17, 1927. He was graduated from the College of Physicians and Surgeons, Keokuk, 1858. Was said to be the oldest Master Mason in the State in point of membership. Had been mayor of Lincoln twice and practiced medicine there more than forty years. He was a member of the Lincoln County Society and a former member of the State Society.

26. WILLIAM HARWIN HARRISON, Herington, aged 64, died October 31, 1926, of acute dilatation of the heart following an operation for the removal of the prostate gland. He was graduated from the University Medical College, Kansas City, 1897. Was organizer and president of the Herington Hospital Association. He was not a member of the State Society or the American Medical Association.

27. FRANKLIN ALEX HOUSER, Arkansas City, aged 70, died December 16, 1926, at the Topeka State Hospital of general paralysis of the insane. He was not a graduate of a medical school, but was licensed in 1901. Was not a member of the State Society or American Medical Association.

28. JAMES ERASTUS JEWELL, Moran, aged 79, died of pulmonary tuberculosis, August 27, 1926. He was graduated from the College of Physicians and Surgeons, Baltimore, 1881. He was retired but had practiced in Moran forty-five years. Was not a member of the State Society.

29. JAMES M. KEMPER, Alma, aged 68, died of heart disease following influenza, January 18, 1927. He was graduated from Miami Medical College, 1882. Had practiced in Wabaunsee county forty years, serving seven years as County Health Officer, and four years as Register of Deeds. He was not a member of the State Society or American Medical Association.

30. DAVID F. LAUGHLIN, Clyde, aged 93, died of senile degeneration of the heart and kidneys, May 17, 1926. He was not a graduate of a medical school, but had practiced in Clyde for fifty-seven years.

31. GERALD LOUIS McGONIGLE, Frankfort, aged 36, died of acute dilatation of the heart, June 27, 1926. He was graduated from the University Medical College, Kansas City, 1913. He was not a member of the State Society or American Medical Association.

32. FRANK LECORTIS McKINNEY,

Galena, aged 47, died of pulmonary tuberculosis, May 17, 1926. He was graduated from the University Medical College, Kansas City, 1908. Had served on the City Council. Was a member of the Cherokee County and State Societies and the American Medical Association.

33. EDWIN GRENVILLE MASON, Cawker City, aged 71, died of nephritis, May 5, 1926. He was graduated from the Eclectic Medical College, Cincinnati, 1885. Was a Councillor for the Seventh District and an active member in the State Society, and a Fellow of the American Medical Association.

34. OLIVER A. MENGES, National Military Home, aged 48, died of streptococcic sore throat, August 9, 1926. He was graduated from the Baltimore Medical College, 1908. He was in the Indian Service one year and was Assistant Surgeon at the Kansas National Military Home for ten years. Was a member of the Radiological Society of North America and a Fellow of the American Medical Association.

35. JOHN ORR MILNER, Kansas City, Kansas, aged 65, died of apoplexy, December 3, 1926. He was graduated from the University Medical College, Kansas City, 1887. Was formerly a member of the State Legislature. Had been on the staff of St. Margaret's Hospital. He was a member of the State Society and a Fellow of the American Medical Association.

36. HENRY PHELPS MONROE, Waverly, aged 72, died of pseudo leukemia, September 25, 1926. He was graduated from the College of Physicians and Surgeons, Keokuk, 1883. He was formerly an assistant at the Osawatomie State Hospital four years. was not a member of the State Society or American Medical Association.

37. ORVILLE OTHELLO MOORE, Effingham, aged 45, died suddenly of angina pectoris, April 28, 1926. He was graduated from the Kansas Medical College, Topeka, 1906. He was formerly on the Staff of the St. Francis Hospital. Served four years in the Medical Corps during the World War. He was a member of the State Society and a Fellow of the American Medical Association.

38. BENJAMIN F. MORGAN, Clay Center, aged 69, died of angina pectoris, February 28, 1927. He was graduated from the Drake University College of Medicine, Des Moines, 1887. He was a surgeon of the Union Pacific and Rock Island Railroads. Had held all the offices in the Clay County Society, and was President of the State Society. Was also a member of the Golden Belt and a Fellow of the American Medical Association.

39. PETER J. MORRISON, Hillsdale, aged 80, died following long illness of pneumonia and cerebral hemorrhage, May 26, 1926. He was graduated from the University of Michigan Medical School, Ann Arbor, 1869. Was not a member of the American Medical Association.

40. ZACHARIAH NASON, Kansas City Kansas, aged 72, died of sarcoma, February 19, 1927. He was graduated from the College of Physicians and Surgeons, Baltimore, 1888. Was formerly on the Staff of the Bethany Hospital, and Professor of Clinical Obstetrics, University of Kansas Medical School, Rosedale. He was a member of the State Society, and a Fellow of the American Medical Association.

41. EDWIN B. PACKER, Osage City, aged 71, died February 6, 1927. He was graduated from the Eclectic Medical College, Cincinati, 1883. He was one of the pioneers of Osage City, having lived there fifty-six years, arriving there with the first load of lumber for the hotel, 1869. He spent two years in a Government surveying party going to the Pacific coast by way of the Yellowstone and returning by the Rio Grande. It was around the camp fires of this expedition that he learned to read and write. He returned to Osage and worked as a pony express rider, sold flour, worked in the mines, taught school and read medicine in his uncle's office. He practiced medicine in Osage more than forty years. Had been mayor and served seventeen terms on the City Council, and was identified with most of the improvements of the community. He was not a member of the State Society or the American Medical Association.

42. JOHN McCLELLAND PARRINGTON, Emporia, aged 57, died of arteriosclerosis, May 16, 1926. He was graduated from the Indiana Medical College, Indianapolis, 1902. He was a Knight Templar and Presidential Elector, 1924. Had served as Chairman of the City Board of Health a number of years, and had held all the offices in the Lyon County Society. He specialized as an anesthetist and was a member of the Associate Anesthestits of the United States and Canada. Was also a member of the State Society and the American Medica lAssociation.

43. PRINCE A. PEARSON, Kinsley, died of acute gastritis and enteritis, Februuary 14, 1927. He was not a graduate of

a medical school, nor a member of the State Society or American Medical Association.

44. FRENN LESLIE PRESTON, El Dorado, died of malignant endocarditis, November 26, 1926. He was graduated from the North-West University School of Medicine, Chicago, 1911. He was on the Staff of St. Luke's Hospital. Was a member of the State Society and a Fellow of the American Medical Association and a Fellow of the American College of Surgeons.

45. ABRAM A. RAUB, Topeka, aged 87, died following an operation for retention of urine, October 3, 1926. He entered the Medical Department of the University of Pennsylvania, but before graduation answered Lincoln's first call for ninety-day men. Was invalided home and finished his medical education in 1863, and again entered the service as Medical Cadet until ill health forced his resignation in 1864. He came to Kansas and settled on what was then the frontier at Cawker City, in 1879. He was Government Physician to the Pottawatomie Indians and served eight years as Chairman of the Pension Examiners of Shawnee County. He was also County Physician and for four years Chief Surgeon at the Kansas State Soldiers Home at Dodge City.

46. IRA E. SANDERSON, Pittsburg, aged 73, died at Kansas City, Kansas, October 23, 1926 of uremia complicating chronic nephritis. He was graduated from the Missouri Eclectic Medical College, Kansas City, 1898. Was not a member of the State Society or American Medical Association.

47. GEORGE H. SEIGEL, Wichita, aged 68, died March 9, 1927 of carcinoma of the left arm due to x-ray burns. He was graduated from the Kansas Medical College, Topeka, 1900. Was one of the pioneer roentgenologists of Wichita. He was not a member of the State Society or American Medical Association.

48. LESTER ISAAC SIMPSON, Moran, aged 41, died of accidental overdose of opiates, September 1, 1926. He was graduated from the Kansas School of Medicine, Rosedale, 1907. Had served as Captain in the World War eleven months overseas.

49. FLAVIUS R. SMITH, Winfield, aged 64, died of cerebral hemorrhage, Mar. 25, ,1927. He was graduated from the College of Physicians and Surgeons, Keokuk, 1889. Had been head of the Winfield Hospital eighteen years. He was a member of the State Society and a Fellow of the American Medical Association.

50. EBERHARDT HOLLAND STEWART, Chanute, aged 72, died of carcinoma of the stomach, November 18, 1926. He was graduated from the North-Western Medical College, St. Joseph, 1892. Was not a member of the State Society or American Medical Association.

51. FRANK B. TAGGART, Independence, aged 45, died of brain tumor (Glioma) January 27, 1927. He was graduated from the Kansas City Medical College 1904. He was a member of the State Society and a Fellow of the American Medical Association.

52. WILLIAM HENRY VAN MEER, Longton, aged 72, died of cancer of the rectum, February 7, 1927. He was graduated from the Kansas City Homeopathic Medical College, 1890. Was a member of the State Society but not of the American Medical Association.

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Doc Goes to the Carnival

RENIG ADE

Raucous music rings out on the night air. The wail of the trombone, the um-ta-ta of the sickly tenor, the slithery tones of the brass cornet, and the riotous duel between the cymbals and drums, all announce in glaring discordance the arrival of the Carnival — "the unparalleled, unrivaled, conglomeration of living wonders."

It had remained a secret of a trusty few up to this time. The City Clerk—that useful appendage of all the smaller cities and villages—had surmised it when a greasy individual with loud cravat and much dandruff in evidence had approached him in a confidential manner for the purpose of securing a license for Hickerman's Wild West 606 Carnival. When informed that the license will be $25.00, he airily announces he will be back later. He then goes to the Chief of the Fire Department and offers to put on his magnificent show under the auspices of the firemen, the latter to receive 15 per cent of the receipts, after all expenses are paid. Should the Fire Department turn down this munificent offer, other organizations are approached, and usually one is found willing to co-operate. Any entertainment sponsored by the fireboys usually gets by without paying a license fee. Should all the overtures to local organizations be repulsed, the Carnival will rent ground just outside the city limits and open for one week only.

This is the small town Carnival.

The strains of "After the Ball" floating up through the evening air unmistakably betrays the fact that the Carnival is here,

and that the merrygo-round is open for business.

The Doctor heard it, and even imagined he could smell it, though it was many blocks away.

The merry-go-round is here with its proud steeds, its stately giraffes, and its sensuous "lover tubs."

The beagle ears of the younger son point alertly. He crawls under the chicken house and retrieves his cap. He is now ready to go to the carnival.

The Doctor carefully explains the frivolous standing of these organizations, and the much more creditable surroundings of home and loving parents. This is a formal protest routinely expressed at Carnival time, and which heretofore has availed naught. This time, however, he sees the lad's eyes soften, and feels the pressure of the brown hand in his. At last he is getting results!

"All right, Dad, is that all? Come on, let's go."

Helplessly the Doctor looks at the boy's mother, who suggests, "It might be all right to take him down and let him ride once on the merry-go-round."

That settles it. Our offspring must go, and we must accompany him.

We meet many of our friends there on a like mission, looking a bit sheepish, but with laudable parental affection trying to please the children. The latter ride on the creaky old merry-go-round, and we gratefully notice the machine comes to a stop without yielding to centrifugal forces and flying to pieces as a mute protest against the atrocious "After the Ball" and "Sweet Marie."

We may as well look around a bit, so long as we are here. Great pandemonium prevails in front of a medium-sized sagged tent. Fierce cries, growls and horrible noises come from the inside. An individual with a nose suggestive of pre-606 days is harangueing the onlookers anent the Wild Girl Who Eats 'Em Alive.

"The Wild Girl! The Wild Girl! Fer twelve years they fed her on the end of a pitch fork." Just how they held her up on the end of a pitchfork our informant fails to specify.

She is a wild woman and scorns modern culinary art. She "eats 'em alive." An occasional roar or groan or combination of both comes from the inside of the tent, and the most unimaginative one in the crowd can feel that just at this moment she has torn a gorilla limb from limb and is devouring it. A perspiring attendant with a large pole dashes in and out, and to all appearances lustily pounds and prods the wild woman at frequent intervals. This obviously is to prevent a useless slaughter of the gorillas.

The natural thing to do is to crowd in with the crowd, there being safety in numbers, and glimpse this maniacal amazon in her lair. We clutch our boy's hand tighter, and push inside.

The Wild Woman has ceased trumpeting, and is evidently gorged. She is sitting in a recess of the sagging tent, and lying alongside of her in stupid and loving companionship is a bull snake. The Wild Woman is a cadaverous mixture of negro and Mexican,, weighing about 95 pounds; poor mental wreck who never in her life has torn anything limb from limb except the vermin she has captured on her unwashed person. The horrible groans and roars, we discover, are produced by a pimply faced young man who vigorously pulls a heavy resined cord back and forth through an old tin can. We grin at each other foolishly, and bid adieu to the Wild Woman.

The band has made another "point" in the language of the bird dog.

The barker is now in front of the "49" tent, and on the platform out in front are six of the '49 girls. The modern carnival is not complete without a "49" show. It is supposed to be a re-duplication of the frontier dance hall as it existed during the gold rush. The girls will dance with anyone for a dime.

"They are from the best homes in the land, and nothing will be said or did to offend the most fastiddyus"—the exact words of the barker. Like sisters of mercy they go from place to place scattering sunshine and joy. Dancing their way, as it were, into the lives of the common people. The Doctor imagines he can smell iodoform.

During the introductory spiel the "49" girls stand statuesquely posed, casting appealing glances here and there, and openly expressing admiration for different young men, middle-aged men and old men.

We now come to the lady who insists that we throw base-balls at a row of baby dolls on a rack. "One baby down—one cigar; two babies down—two cigars; three down —half a dollar."

She encourages the more timid by thrusting the balls into their hands and slipping her hand into their pockets in search of coin. Soon competition is aroused and the young sports essay to show their manly wares. The coat is thrown off, the pink

sleeve holders pulled up, the celluloid cuffs parked with a reliable friend, and the balls are wildly hurled.

The young lady in charge registers admiration and then alarm for fear the heavy muscled youth will win the cigars. Being out of practice his first six throws miss the rack entirely. The next fifteen manage to topple over two of the scarecrow dolls, and he is presented with a pair of very bad cigars. He is also given a quiet tip to come back after the show and try his luck again.

With cigars burning and hissing they drift over to see "Baby Nell," the sunkissed fat lady, who is busy fanning herself, selling her photos and cussing the town.

We pass the dark-complexioned lady who sits with grimy hands and finger nails grabbing impartially at skirts and trousers that go by her tent. The past, present and future she is willing to divulge and guarantee for the sum of fifty cents. She also has a distinct Carnival odor.

We next come to the Hula Dancer. Be it known, a Carnival company without a hula dancer or its equivalent is on a par with an Uncle Tom company without an Eva.

The hula dancer is a faded damsel of questionable age, but there is no question as to character. She is dressed in an abbreviated costume, and while the spieler is dilating sotto voice upon the delicious nastiness of the performance about to take place, she emphasizes the good points of the speech by a seductive tremulo of some part of her anatomy, and a wink at the high-school boys who are gathered close.

At the proper psychological moment, accented by an especially well executed abdominal contortion, and the hub-bub of ticket sellers, the tent is thrown open and the boys crowd in.

They are good boys, but they are the male of the species and full of vim. They have an inherent curiosity to know just how deadly is the female. They defy the hula girl to do her worst, and applaud liberally. They fear she may become disarticulated and writhe away in different directions, but they stay the full performance. A few of the more demonstrative who stay longer than the rest are confidentially informed that it being warm weather, the hula girl, for an extra dollar per capita, will endure the rigors of the climate for a short time and will attempt one of the beautiful Hawiian folk dances sans husks, sans everything.

Out of deference to the marshal, who can't get there until late, the performance is given in the old creamery building several blocks away. A good attendance is reported.

At the meeting of the Band of Helpers the next day each individual who has been to the uplift dance is mentioned by name. Many a lodge alibi goes to the discard at this meeting.

The Carnival has come and gone. Some think it was good—some think it was bad. But the Doctor knows.

KANSAS MEDICAL LABORATORY ASSOCIATION

Interpretation of Bacteriological Findings in Water Analysis

CASSANDRA RITTER

In a previous paper* the methods for bacteriological examination of water supplies are described in detail. The present paper deals with the interpretation of the bacteriological findings.

Although bacteriological examinations are the most frequent tests made of the waters in the state and the most important in controlling the spread of disease, much can be learned from other tests. It is well known that a water may be clear and sparkling and yet contain disease germs, or that water safe for consumption may be salty or brackish and turbid. A bacteriological test tells the state of the water at one definite time, but intermittent polution may be suggested by certain chemical results, or the location of the supply.

There are three things which it is essential to know about a supply of water, in judging its suitability for drinking purposes. There are its bacteriological condition, its chemical content, and the relation of the source to its surroundings, generally called the sanitary survey. All three of these phases are examined by the personnel of the State Water Laboratory, and recommendations made from the combined results.

The typhoid bacillus can not easily be tested for in routine work, even though it is the cause of one of the most common water borne diseases. The laboratory procedure is very intricate and time-consuming, and the numbers of typhoid bacilli small, compared with the numbers of other organisms present. Furthermore, the specific contamination may have disap-

*Refer to previous issues of this column.

peared by the time an epidemic manifests itself, so that negative findings would be of no significance and might be misinterpreted. The presence of the colon-aerogenes group as indicated by lactose fermentation is universally used in the United States as an index of pollution.

The sources of these organisms are two: Bacteria coli is found in the intestinal tract of all warm-blooded animals, and bacteria aerogenes in the soil, and in smaller numbers, in the intestinal tract. The presence of these organisms in any considerable number in a water supply, therefore, indicates rather recent fecal pollution or pollution from soil which may also contain organisms of fecal origin. Since organisms such as B. typhosus, bact. dysentary, cholerae, and in certain countries, others, are contained in the intestinal discharges of cases and carriers, a water supply contaminated with any fecal material is potentially dangerous. Investigators have studied hundreds of strains of these organisms, isolated from all possible sources, including water, and have found many variation within the group. This was particularly true for those strains from water, as many of them showed cultural characteristics of both bact. coli and bact. aerogenes. These observation, together with the fact that a polluted water will almost certainly contain some of each of the two types of organisms, have brought about the routine practice of making no distinction between them but reporting the presence of members of the coli-aerogenes group.

There are certain cases wher ea differentiation of organisms has value, particularly in the case of ground waters such as wells or springs. A small amount of pollution which showed mostly bact. aerogenes,, might be surface water from seepage around the casing, rather than contamination with sewage wastes of the ground water stream. The same might be true for springs which had not been developed. Bacteriological examinations are made of the following types of water supply: 1. treated waters ,2. ground waters, 3. publis health samples, 4. botled waters and 5. ice.

The weekly examination of treated waters is made to determine the numbers of organisms remaining after each step of the purification process. Usually four samples are tested, namely: raw, coagulated, filter effluent and tap. The raw water is tested in a great many dilutions to find the total number of coli-aerogenes organisms present as the amount of treatment is determined by the amount of pollution to be removed. Samples from the coagulation basin show whether or not the process of adding coagulants and producing a floc is doing its share and not leaving too heavy a burden for the filters. The filter affluent, in like manner, tests the efficiency of the filters, and gives information as to their condition, and the amount of chlorine necessary. The tap sample shows whether or not the treatment has been adequate so that the water is safe for public consumption.

Information about each water supply in the state is filed by the Division of Water and Sewage. It is kept up to date by inspections and reports as well as by the weekly analyses. These tests, with chemical tests of alkalinity, turbidity and sometimes chlorides, keep a constant check on the efficiency of each filter plant. When a new surface supply is developed, the particular treatment, as amounts of coagulant and of chlorine needed, is determined by bacteriological and chemical tests of the raw water.

The total number of bacteria present is determined by a plate count. In this laboratory the count at 37 degrees Centigrade is used. The organisms developing at this temperature are the colon bacilli and those associated with them, so the number is related to the amount of sewage pollution. Counts are sometimes made from a 20 degree Centigrade incubation; more of those organisms are soil and water types. But by any method, the total count helps indicate the degree of purification. From a filter plant series, a gradual removal can be noticed. Ninety-five per cent of the bacteria in the raw sample should have been removed by the time the water is ready for chlorination. With ground waters, there is a similar correlation; any amount of pollution is generally accompanied by a correspondingly higher count.

In reporting analyses of samples, an arbitrary rating is used, accompanying a full report of the laboratory results. This rating is based on the fermentation of lactose by amounts of water in .1cc to 10cc quantities. Any tube showing fermentation presumably containing at least 1 coli organism in the amount used. Only water presumably ready for consumption is so treated.

"Excellent" is used when no fermentation of lactose broth is present using 10 cc amounts of warter, and where the plate count shows less than 100 organisms per cc.; "good" when there is no fermentation with 10 cc samples but the count is over

100 organisms per cc.; "fair" when the 10 cc portions of water in lactose broth show fermentation; "doubtful" when the 1 cc portions are positive, and "bad" when the tubes containing 0.1 cc of the sample show fermentation. These ratings, with "excellent" and "good" combined, are used in the yearly chart made of the comparative standings of surface supplies.

Ground water supplies do not need the constant testing that surface water supplies do. The tests are made twice a year, and inspections once a year, the latter being especially important. The majority of the supplies do not show the presence of coli where a sanitary survey shows no near sources of pollution. Some supplies show a small amount of pollution, such as fermentation in the tubes containing 10 cc of the sample. This result suggests a small amount of contamination, as from surface wash, or intermittent pollution. If the bacteriological tests are negative and chemical tests show a large amount of organic matter manifesting itself as nitrates and nitrites, this indicates more remote contamination, and sources of pollution may be looked for. Water through shale or limestone, might not be subject to sufficient natural filtration to make it safe. Since the ground water stream roughly parallels the river pollution is looked for in the direction upstream as regards ground water movement. Cesspools or abandoned wells may be the source of the trouble.

Spring waters are usually good if they are properly developed. A high degree of pollution due to surface wash may disappear when the surroundings are cared for.

Public Health samples present individual problems. These are samples from private water supplies such as drinking water supplies at railroad stations or on common carriers. With each sample bottle an information sheet is included, giving space for the kind of supply, depth and use of the well location in relation to trees, barnyards and cesspools, and occurrence of cases of typhoid fever. The wells in this group are often shallow wells or cisterns. It is interesting to note that a large percentage of these samples show gross contamination, making them unfit for use. This is probably not an index of the wells in the state but merely an instance of the neglect of a supply because it was good tasting, or until illness made it suspicious.

The sources of pollution of public health samples are much the same as for ground waters. Shallow wells and cisterns with a moderate amount of contamination, may need to have surface wash excluded or particularly in the case of cisterns need cleaning. The water may then be made fit for use by treatment with chloride of lime. Tree roots breaking through the wall may open the way for pollution to enter, or as in a cistern undesirable ground water may seep in. Chemical tests for alkalinity are useful in detecting the latter as cistern water is softer than the ground waters of the state.

All water used on common carriers, or in stations is analyzed to comply with the Treasury Department standard. This requires that five 10cc portions of each water sample shall be examined for lactose fermentation; not more than 10 per cent of the portions shall show the presence of colon-aerogenes organisms. When the number of samples examined from a supply is 20 or more not more than 5 per cent of all samples shall show positive fermentation, if three or more of the five 10cc portions examined for each sample show colon bacilli. If less than 20 samples are examined, not more than one sample may show colon bacilli in three or more 10cc portions. Sources not meeting these requirements are discarded, or treated until they are of the requisite purity.

The pollution showing in bottled waters is from improper cleansing of the bottles, or a contaminated supply, as a spring which does not have a clean outlet. Ices do not often show positice tests. In manufactured ice, the trouble is usually a dirty plant, or an impure water supply. Natural ices may show positive tests when first harvested, if the source is a polluted stream, or the handling is not done with care. As organisms will die after prolonged freezing, a storage period of four months is recommended for natural ices showing a moderate amount of pollution, such as postive fermentation in 10 c.c. amounts, only. All ices and bottled waters must show negative tests before they can be licensed and sold in the state.

Recently, the State Board of Health has made a requirement that roadside water supplies shall be examined and labeled as safe if the water is good, or condemned if it shows pollution. As these sources are usually wells, they present no new problems in analysis; but it is hoped the practice will reduce the cases of typhoid fever contracted by the traveling public from their indiscriminate use of whatever water is available.

UNIVERSITY OF KANSAS CLINICS

Clinic of Frank C. Neff, L. P. Engel and F. C. Helwig.

Departments of Pediatrics, Surgery and Pathology

PRIMARY CARCINOMA OF THE LIVER IN CHILDREN

(Malignant Hepatoma)

The rarity of primary carcinoma of the liver at any time of life is justification for the reporting of an individual case. One is struck however, with the attention now being paid to its occurrence in childhood, probably due to the fact that epithelial malignancy is no longer considered as exclusively confined to mature age.

Due to the fact that incomplete studies were made of some of the earlier cases, it is difficult to determine how many of those reported were truly primary. Indeed, most enumerations of hepatic malignancies in children include the sarcomata which occur more commonly. Only since 1870, has the primary form of hepatic carcinoma been separated from the metastatic.

In 1901, Eggel could find but 163 cases of authenticated primary carcinoma of the liver in individuals of all ages. In 1918 Griffith reviewed 57 cases of primary carcinoma of the liver occurring in children and according to the recent article of Nicolaysen, more than 100 cases in children are now on record. However in Griffith's collection no attempt at differentiation of the type of primary carcinoma could be made.

As regards the comparative incidence of malignancies in childhood, the figures of Phillip show that nearly half of these are in the digestive tract and 14 per cent are carcinoma of the liver. In general, connective tissue tumors are more common than epithelial in early life.

Figures are too meager to draw conclusions as to the age frequency in childhood. A few cases are reported for each year of early life, some in the newly born, others in early infancy and in Griffith's series there were 16 in the first year.

CASE REPORT

M. H., thirteen-year old girl with a normal family history admitted to the University of Kansas Hospital 1-19-26. She had the usual childhood diseases, also asthma, hay fever and one slight attack of rheumatism. She was perfectly well until four months prior to admission to the hospital when her father, who is a physician, noticed jaundice of the sclera followed by a deep jaundice of the skin, constipation, putty colored stools with highly colored urine. In spite of a ravenous appetite, she had a dislike for milk and fats and there was considerable weight loss. Later she complained of pain about her heart, the feet and ankles became swollen and fatigue and listlessness developed. The abdomen became gradually enlarged and is said to have been tender recently. She had lost 15 pounds.

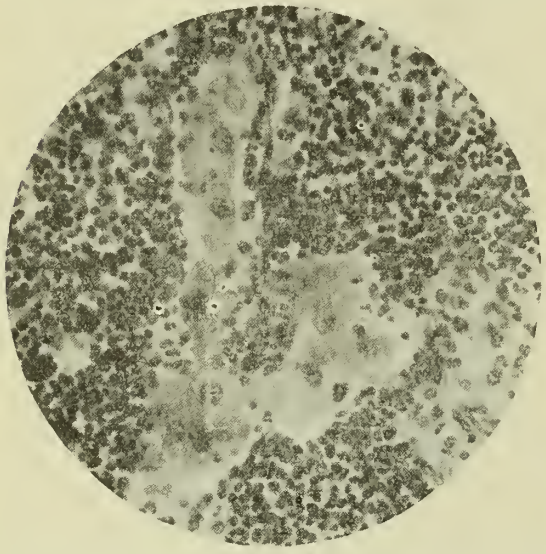
On examination the striking features were the intense jaundice, the greatly enlarged abdomen, the poor nutrition and the marked anemia. The constipation had been replaced by diarrhea with blood in the stools. There was a systolic murmur and areas of ecchymoses over the thin legs. The abdomen was markedly distended, a fluid wave was present with dullness in both flanks. The liver dullness reached downward to the umbilical level 18 cm from the 5th interspace on the right and from the 6th on the left side, extending to the left nipple line. The surface of the liver was smooth, the consistency hard, and palpation revealed no tenderness, but there was some right-sided pain. Pulse 110, respiration 22. The urine showed bile and a high specific gravity. Examination of the blood showed 68 per cent hemoglobin and 3,700,000 red cells with a coagulation time of eight minutes. The urea nitrogen was reduced to 7 mg. and a direct van den Bergh reaction was obtained.

The diagnosis was apparently hepatic malignancy. Because of the apparent hopelessness of the case it was determined to explore the region of the biliary duct, in the hope of finding an obstructive growth or cyst.

Operation—January 21, two days after entering the hospital, an exploratory right-rectus incision was made. Upon opening the peritoneum a large amount of clear bile-stained fluid escaped. The liver was dark green with a wrinkled capsule, suggesting an early biliary cirrhosis. There were no nodules on the surface. The gall-bladder was thickened, distended, and could not be emptied by pressure. The common duct was enlarged, and widway between the cystic duct and the ampulla there was a hard, slightly elongated mass the size of a small olive. The poor condition of the patient necessitated leaving this mass alone, but the gall-bladder was opened and drained of blood and bile. There was no excessive hemorrhage from the wound.

On the following day the stools contained bile. The days that followed were marked

by blood drainage from the gall-bladder and incision, and occasionally occurrence of blood in the stools, the bleeding not affected by various therapeutic measures. On the fifth post-operative day the abdomen became more distended the temperature elevated to 101.4 degrees F. these symptoms persisting and for several days the bleeding increased, the blood failing to



Photomicrograph of lymph gland showing metastasis with preservation of the hepatic cell morphology seen in the primary tumor. Mag. X 525

clot. A transfusion of 400 c.c. of blood on two days caused some improvement. It was believed that the child had developed a chemical peritonitis from leaking of bile into the peritoneal cavity. Abdominal drainage was instituted in the lower right quadrant and cloudy bile-stained fluid escaped. Death occurred on January 30 on the ninth day after operation four and one-half months after the onset of the first symptoms.

Necropsy—The main gross findings consisted of intense jaundice and a thick purulent bile tinged peritoneal exudate. The liver was greatly enlarged measuring 25 by 22 by 10 cm. and weighing 2550 grams. There were hemorrhagic fibrinous adhesions about the hilum. The liver was dark green and the capsule wrinkled. Only when the liver was detached from the diaphragm and removed from the abdomen was the neoplasm evident. Immediately under the dome, there was a large scarred infiltrating tumor mass in the substance of the liver. The mass measured approximately 12 by 11 by 8 cm., was irregular but more or less rounded. It cut with resistance and was found to spread out in a fan-like manner into the surrounding liver lobules. The tumor was hard, fibrotic and showed a very atypical architecture with bands of fibrous tissue dividing it into numerous poorly defined irregular lobules. The center of the mass was pale, colorless, but with some hemorrhagic areas. There was no evidence of encapsulation and no similar nodules elsewhere in the liver.

A rather large nodule was palpable in the common duct. On opening up the dilated common duct a hemorrhagic tumor mass was encountered about 1 cm. below the junction of the cystic with the common duct. This mass measured 45 by 15 mm, projected into the lumen of the common duct and caused marked thickening of its wall. On tracing this mass up it extended by direct continuity along the right branch of the hepatic bifurcation into the tumor mass in the right lobe.

The other viscera showed chiefly hemorrhagic manifestations consisting of numerous small petechial hemorrhages in the pelvic mucosa of the kidneys. The surfaces of both lungs likewise showed numerous hemorrhages under the pleura. The stom-



Photomicrograph through the primary growth showing architecture of a hepatoma, the cells resembling liver parenchymal epithelium. Mag. X95

ach was filled with fluid, containing coffee ground material and poorly clotted blood adherent to the cardia under which were many submucous hemorrhages. The jejunum had ecchymotic areas and some submucous emphysema. The ovaries and tubes showed a deep reddish-purple subserous injection. The other organs presented nothing worthy of note.

Histological Pathology—A section thru

the main tumor showed a cellular mass composed of rounded polygonal and elongated cells with pink cytoplasm and in many cases large rounded nuclei resembling liver cells. Many of the cells presented a high grade vacuolar change and in some places contained bile pigment. They were embedded in a rather scanty stroma of a vascular character, in some cases lying on open vessel spaces resembling the cords and sinusoids of normal liver. The cells resembled liver parenchyma but were quite variable in size, shape and staining. The architecture was very wild. Some peculiar mitotic figures were seen. There was a tendency to hemorrhage and a fibrous increase chiefly near the liver tissue which was being invaded by the tumor. There was no other evidence of encapsulation. The surrounding liver tissue showed a pressure atrophy, and marked accumulation of bile pigment. In some cases this amounted almost to necrosis in certain focal areas with some early increase in fibrous tissue. The liver tissue adjacent to the tumor in some places showed an unusual amount of diffuse fibrosis with both atrophy and disintegration of liver cells.

Section through the liver tissue which was not involved by the tumor showed periportal fibrosis some bile duct proliferation abundant leucocytic infiltration and some accumulation of brown pigment in the liver cells.

The mass which projected into the common duct presented a picture similar to that of the mother tumor, there being however more hemorrhage and degeneration although the structure was more cellular and cells retained the morphology of the hepatic parenchyma.

A section from a lymph gland at the hilum showed invasion with scattered, large, pale, polygonal and rounded cells, with a large amount of cytoplasm. These cells simulated hepatic cells and those of the original tumor.

Diagnosis — Primary malignant hepatoma of the liver with extension into and obstruction of the common duct, metastasis to the lymph glands of the transverse fissure, early biliary cirrhosis and interstitial hepatitis, multiple submucous hemorrhages of the gastric and intestinal mucosa, subperitoneal and subpleural hemorrhages, fibrino-purulent peritonitis, hemorrhagic pyelitis, acute splenitis, acute hyperplastic lymphadenitis.

Discussion of Case.—This case is undoubtedly a true malignant hepatoma. A pre-operative diagnosis of probable sarcoma of the liver was made but at operation the finding of a common duct obstruction was misleading and only at autopsy was the true nature of the condition ascertained. We feel that our case is unique in that extreme jaundice and early biliary cirrhosis were present due to direct extension from the primary tumor down into the common duct causing an obstruction. In the literature it is stated that these conditions are never present in children with uncomplicated primary hepatic carcinoma. The necropsy findings clearly explain the symptoms in this case. From a surgical standpoint the marked delay in clotting time of the blood, with hematemesis, submucous and subserous hemorrhages, the absence of normal healing, and a leakage of bile and resultant peritonitis are interesting but unfavorable features of exploratory incisions. The finding of an obstructive mass in the common duct suggests a stone or malignant tumor, and the green appearance of the surface of the liver with a wrinkled capsule would lead one at operation to suspect cirrhosis. Successful surgical removal has been reported where the tumor was attached to the lower border of the liver, but in our case the high location of the primary growth, ,with bile duct invasion and early lymphatic dissemination made removal impossible.

Etiology.—The cause of carcinoma of the liver in childhood is as little understood as that in later life. In the decades between 40 and 60 years of age, a close relationship occurs between long-standing cirrhosis and its subsequent carcinomatous degeneration. The association of cirrhosis suggests the probability of a compensating proliferation indicate that the tumor may originate from multiple foci in the liver. It is of interest to note that in mature life there is a definite predominance of occurrence in males. In contrast, children develop hepatoma from one primary focus, the growth is seldom associated with cirrhosis and the sex incidence is about equal.

One commonly accepted theory presupposes that cancer originates in the cells of misplaced embryonic tissue. Congenital tumors themselves seldom become malignant, but groups of cells may be congenitally dislocated so that they are not in intimate relation to the normal liver tissue and their bile ducts. The absence of bile ducts in the tumor supports this supposition. That developmental errors can occur is shown in the presence of supernumary liver nodules sometimes found on the surface of the liver, in the peritoneum,

mesentery and other organs. It is reasonable to assume that solitary congenital nodules may be present within the borders of the liver.

What the restraining influence is which in health prevents the hyperplasia and subsequent malignant proliferation of these "rests" is not known. There is no evidence in the reported cases that these children have had any previous injury or pathological condition of the liver structures.

Identification.—Primary malignant epithelial tumors are best classified simply as hepatomata or cholangiomata. In the former the cells arise from and resemble the parenchymal cells of the liver and this variety is known as liver-cell carcinoma. In the other type the origin is from the epithelium of the biliary ducts and this is known as bile-duct cancer . The classification of Goldzieher and Bokay, later modified by Yamagiwa, has been accepted by most writers. It is hoped that for the purposes of statistics, all cases which are reported in the future will be classified in this way.

Clinically it is impossible to differentiate these two types but histo-pathologically they can usually be identified readily. In hepatomata the cells are arranged in columns closely resembling the normal liver structure and often an atypical attempt at lobule formation is seen. Usually biliary secretion can be discerned, and in the metastases also there is a striking resemblance to liver structure. The characteristic stroma of the newly-formed lobule is composed of capillaries, although, at the periphery, it is chiefly fibrous and an accentuation of the normal portal stroma.

In the cholangiomata, the cells have an entirely different structure with an attempt at the formation of tubules and atypical alveolar spaces, resembling in many instances a normal biliary duct. There is no bile secretion the stroma is predominantly fibrous but without capillary formation. If the tumor originates from the bile ducts which is rare in childhood, it produces a general enlargement of the liver, uniform and diffuse throughout.

In a few cases differentiation is very difficult, for as Ewing says "the cells may be so far removed from their usual morphology that some doubt must always remain regarding their true origin."

Symptoms and Diagnosis—From a clinical standpoint the symptomatology in childhood is not at all characteristic. In one case there may be a sudden severe pain in the epigastrium; in another the accidental discovery of a mass or an enlarged liver. In our case, which is quite atypical because of complicating obstruction of the common bile duct, jaundice was the first symptom noted. The prominence of the abdominal superficial veins is not pathognomonic of malignancy. Metastases are more apt to be absent than present.

The most significant symptom is the appearance of a tumor in the region of the liver, nearly always of the right lobe. This may not be distinguishable due to the marked enlargement of the liver. Palpation will reveal either a tumor nodule or a general increase in liver area, which may reach enormous dimensions and fill a considerable portion of the abdominal cavity. There is more firmness to the touch than is found in the normal liver.

The striking and most important general symptom is the cachexia, this is apparent in the pallor and definite anemia, while the nutrition is likewise disturbed. The loss of weight is progressive and soon the emaciation of the child is in marked contrast to the prominent abdomen.

Pain is usually referred to the region of the liver and it may be acute or dull. It is due to distension of the capsule by the growth or by the hemorrhage beneath it.

Hemorrhage is a frsquent symptom of liver-cell carcinoma. Clinically it occurs as hematemesis or as extravasations into the skin. Hemorrhages play a part in the progress of the anemia. In our case oozing from the wound tissues showed no tendency to subside, nor would the blood clot. At autopsy visceral hemorrhages were numerous.

Ascites is a rare manifestation. Its value as a symptom is in its association with evident hepatic tumor or enlargement, and indicates an involvement or compression of the large veins.

The opinion is prevalent that the disease may be present for some time before symptoms are noticeable. The duration of the disease in childhood corresponds to that of adults. White's statement is commonly quoted, namely that the patient seldom lives over four months after the appearance of the tumor.

In the diagnosis one may get some help from the coincidence of the tumor movement with the respiratory excursion. This is more complete than is found with extrahepatic growths. Tumors of the kidney and colon appear in this region and if they have become adherent to the liver they will move in unison with the diaphragm.

In childhood malignant growths are far rarer than inflammatory (toxic) or para-

sitic enlargements. Echinococcuc cyst is excluded at operation. Other parasitic causes for tumor in the hepatic triangle are sometimes found. Congenital syphilis is most commonly thought of when liver dullness is increased, but it is slow in development and one depends upon other symptoms, the history and serology for its recognition. It is the rapid enlargement and the extreme size of the malignancy which are characteristic. Obviously the clinical differtiation from sarcoma, which is less rare, is difficult or impossible. Metastasis of a far spread nature has occaionally been reported.

With peristent jaundice in children, the possibility of hemolytic rather than obstructive origin must be borne in mind. However, icterus is always absent in uncomplicated liver-cell carcinomata.

The exact diagnosis must be made by the histological examination. Diagnostic laparotomy as recommended by Schmidt is warranted in the hearch for a removable growth. In our case the tumor was inaccessable and the post operative complications formidable.

SUMMARY

A case of primary malignant hepatoma in a girl thirteen years of age is reported in which the unusual features were jaundice and biliary cirrhosis both being due to an extension into the common duct causing obstruction to the biliary outflow. At operation this mass in the common duct was suspected of being a stone. The primary growth was high in the dome of the liver and not palpable at operation. The metastasis in the lymph glands retained the morphology of the primary tumor.

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In cases of severe poisoning by strychnine where the convulsions occur at short intervals continued chloroform narcosis may save the life of the individual. Porter and Carter, in the last edition of their book on The Management of the Sick Infant report two cases that were successfully treated by this means. In one case the chloroform narcosis was continued for twenty-four and in the other case for thirty-six hours. They call attention also to the fact that strychnine is excreted into the bladder and is reabsorbed, so that frequent catheterizations are necessary.

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164,002 Physicians in New American Medical Directory

For more than twenty years the American Medical Association has been publishing a directory of the medical profession. Ten editions have appeared, the last one (1927) being just off the press.

The first edition (1906) contained 128,-171 names of physicians in the United States, its dependencies and Canada. The new Tenth Edition includes 164,002 names. There is an increase of 2,644 over the previous edition. If the Directory were merely a list of names and addresses of physicians it would not have great significance. That information is valuable, but of far greater value is the fact that the Directory gives proof of the right of each physician listed to practice medicine—namely, time and place of graduation and year of license. In addition, society membership, specialty and office hours are included. Capital letters indicate those who are members of their county medical society, and a special symbol follows the names of those who are Fellows of the American Medical Association.

The information concerning hospitals and sanitariums of the United States is another valuable and extensive feature. Descriptive data appears following the names of 7, 816 hospitals and sanitariums such as type of patients handled, capacity, and name of superintendent or director.

The list of physicians in each state is preceded by a digest of the laws governing medical practice in that state; members of licensing board; state board of health; names of city, county and district health officers; officers of constituent state associations and component county and district medical societies. The book, in short, is one vast source of reliable data concerning the personnel of the medical profession and the institutions and activities closely related to it. It contains 2,575 pages and is sold for $15.00. Published by the American Medical Association, 535 North Dearborn Street, Chicago.

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Kansas Medical Society

W. E. McVEY, M.D. - - Editor

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AS OTHERS SEE US

The medical profession has always been ready and willing to do its part, usually more than its part, in any enterprise that has for its object the benefit of the people. Its services are rendered gratuitously or at nominal fees in many instances when these are the only donations made. This charitable inclination on the part of physicians has too often been commercialized by others who receive both the credit and the profit.

Twenty-five years ago fraternal insurance orders were in the heighth of their glory. There were a good many flourishing organizations of the sort in Kansas, and some of them still survive. Insurance in these organizations was ridiculously cheap, everything about them was cheap, even the so-called medical examination the applicants were supposed to "pass."

When the officers in control of one of these generously permitted the doctor to collect one dollar for each applicant examined, they did not expect much of an examination. For, especially when the order was new, it was more important to get members in than to keep them out and unless an applicant's disability was glaringly apparent the examiner was expected to report favorably. It was the exception for the examiner to have the chest bared when listening to the respiratory or heart sounds, and only on certain conditions was a urinalysis required. Certain findings, however were always regarded by the chief examiner, to whom all reports were referred, as definitely unfavorable. The local or lodge examiner was asked to give his opinion as to the character of the risk, but his opinion was rarely if ever considered, or even regarded as of value—why should it be when they got it for a dollar?

Since that time a good many of these orders have gone out of business or have adopted the old line insurance rates and the old line methods of doing business. Some of them still survive however, and conduct their business in much the same manner as twenty-five years ago, and accept applicants who have "passed" the old one dollar examination. Whether they expect any more from the examiner than in the old days one cannot say, but it is evident that the examiner's opinion of the character of the risk is held at the same low estimate. At least that is the logical conclusion from the complaints that have recently appeared, as for instance the following which was credited to The Modern Woodman:

DISHONEST DOCTORS

Fraternal beneficiary societies come into contact with a dishonest physician rather too frequently. These morally warped specimens of an honored profession are guilty of making false statements of the physical condition of the applicant examined by them, with the knowledge that the statements made will cause rejection. They then give the name of the applicant to some old-line agent of a company for whom they examine at a larger fee for their services. The agent visits the rejected seeker for membership in the fraternal beneficiary society and, taking advantage of the alarm caused by rejection, proposes that his company shall give him insurance, stating that he will be put in a special class for substantial risks. The difficulty of discovery of the fraud makes these professional crooks bold in their action.

What has actually occurred in the instances complained of by the writer of the above may readily be inferred, since it does frequently occur when the examiner makes no false statements and when no reflection can possibly be cast upon his honesty of

purpose. As stated above the fraternal insurance orders have certain fixed causes for reejection of applicants and they have no respect for the examiner's opinion of the risk, because it is so ridiculously cheap. On the other hand the old line companies pay, not nearly enough, but a much better fee for examinations, they can usually select their examiners, and are usually willing to give some consideration to the opinions of the physicians they employ.

An applicant for fraternal insurance, for instance, appears for examination and a heart murmur is found, but there is no circulatory disturbance and no secondary changes in the heart. He is told that he will probably be rejected by the fraternal order, but that when these conditions are explained to the old line company he will probably be accepted. There is nothing dishonest in that. The applicant in many such cases is one of the examiner's regular patrons, is himself paying the examination fee, and the question might be asked if he has not the first claim on the doctor"s loyalty. In many such cases the doctor makes no charge for his advice and does not examine for the company that later writes the policy.

If the fraternal insurance orders would pay reasonable fees for examinations they would have more confidence in the reports and opinions of their examiners. One may wonder if any of the officers of any of these fraternal insurance orders would feel confident of a perfect state of health after "passing" one of the one-dollar examinations required of their applicants for insurance.

THE KING CAN DO NO WRONG

Back in the old days when some of us were boys the term "sanctified" was used to describe certain individuals who had reached such a stage of religious devotion that they could do no wrong. In those days a good many of the more devout brothers and sisters "professed sanctification"; and then whatever they did was right. The young people were exhorted to emulate these examples of righteousness and follow the standard of morals they set up. The result was usually disastrous, not on account of fallen idols but in the loss of respect for a moral code.

There seems to be something of this kind going on in the medical profession; not that any of its members are professing sanctification, but they give out the impression in various ways, that they are immune to the restrictions of the principles of ethics. There is now and then one among the glorified few in the profession who has been so exalted by the praise of his friends and so deified by the worship of his particular group of satellites that he comes to believe that he is a little better than the common herd of doctors, in fact that he is really a great man.

Because of the position he occupies, because of his influence and because his followers are certain to imitate his manners, his expressions, his speech, and his attitude toward ethical principles, if he is really great, he will be meticulously considerate of the rights and privileges and particularly of the reputation of other members of the profession.

One who has received unusual recognition by the medical profession is very sure to gain some public notoriety, but if he is medically a great man the publicity offered him will be utilized for the benefit of scientific medicine rather than for his personal aggrandizement. He will welcome interviews by representatives of the press so that he may tell the people what scientific medicine has done and is doing for their betterment. He may be a brilliant diagnostician or a skillful surgeon, but if he measures up to the professional standard of greatness, he will keep in mind the fact that he is simply using the knowledge and experience that has been accumulated by many generations of doctors and that he is but one of thousands in the profession who may benefit from the same resources; and that among these there may be many that know more and have as much or more skill

than he, but lack the opportunity to get in the limelight.

Naturally the people presume that the utterances of these great men in the profession are entitled to respect and represent the concensus of opinion. Some of these men, however, seem to have reached the conclusion that their opinions are more likely to be correct than other men's facts; and the interviews they give to the newspapers and the articles they contribute to lay health publications have done more to mislead the people and to discredit scientific medicine than the propaganda of the cultists.

When such a man as Sir Arbuthnot Lane declares through the columns of one of these publications that the way to avoid having cancer is to move the bowels after every meal and to eat no meat of any kind, there are people who will believe it. He may possibly believe it himself—it may possibly be true—but neither he nor anyone else has sufficient clinical data or experimental findings to justify such a conclusion.

The action of the American Medical Association in condemning statements to the public that do not represent the concensus of opinion of the medical profession is a timely one, but how far this action will control that sort of publicity is yet to be learned. But certainly the public will not be educated or benefited by theories or personal opinions that have no scientific foundation; on the other hand scientific medicine will be so discredited by such misleading and unauthentic statements that no effort to convince the people of its accuracy will be successful.

CHIPS

The proper kind of diet for a typhoid fever patient has long been a subject for controversy. Cecil in his recent work on Medicine gives some comparative statistics reported by Coleman to bear out the assertion that the administration of a liberal diet has actually lessened the mortality. In the series of cases reported by Coleman the mortality on the high calory diet was 8.1 per cent and on the milk diet 17.6 per cent. Perforations occurred in 0.9 per cent of those on liberal diet and in 3.15 per cent of those on a milk diet . Hemorrhage occurred in 9.4 per cent on the liberal diet and 14.4 per cent on the milk diet. However, relapses occurred in 18 per cent of those on the liberal diet and in 14.9 of those on a milk diet. Tympanites was present in 31.5 per cent of those on a milk diet and in 17.6 per cent of those on a liberal diet. Delirium and stupor are also said to be less frequent where a high calory diet is used.

After wading through a half dozen of the more scientific medical magazines one is likely to get the impression that a great deal of time is being spent in research that apparently has no definite purpose and can be of no possible benefit to medicine. A great amount of energy is wasted in tabu lating data concerning a limitel number of cases of a common disease that are mostly misleading and without practical value.

The question as to what particular factor determines the onset of normal labor is perhaps of more scientific interest than of practical value. Knauss has recently advanced the theory that the maturity of the uterine muscle cells which go through a certain cycle of development automatically determines the onset of labor, at the time when this development has reached a physiological maximum. He claims that the nervous supply of the uterus is not concerned in the process. The growth of these muscle cells seems to be controlled by on ovarian hormone which undoubtedly comes from the corpus luteum. He does not believe there is any evidence that the pituitary hormone normally determines labor though it may be able to intensify normal contractions of the uterus into labor pains.

Until results are carefully examined and properly tabulated there are always differences of opinion as to the efficacy of different methods of treatment. In the Journal, A.M.A. April 2, the question of light therapy is discussed. It seems that both the carbon arc and quartz mercury arc lamps are generators of ultraviolet energy, but the carbon arc lamp delivers only about 5 per cent of its total spectral energy in the ultra violet zone while the quartz mercury arc lamp delivers about 28%. An erythema dose can be secured with either, but it requires considerable more exposure with the carbon arc lamp than with the quartz

settle the question except for a difference of opinion as to whether an erythema is or is not necessary for good clinical results.

The efficacy of the blood serum of convalescent measles cases in preventing the disease has been established, but no effective measures for use after the onset of the attack have been developed. (J.A.M.A., April 2). The convalescent serum may be used on contacts, but the degree of protection afforded seems to depend upon the promptness with which it is administered.

When recent convalescents are not available the blood from adults or from children who have had the disease some years previously may be used. It is now claimed that good results have been obtained from the use of immune goat serum. Investigations are still going on and it is not improbable that some definite method of preventing the disease or of controlling the dangerous secondary infections will ultimately be developed.

In the face of growing enthusiam for the treatment by injection of varicose veins of the leg and hemorrhoids, it is well to consider a recent report of a death after injection treatment of varicose veins. A man, aged 60, who had dilated veins in the left leg, was treated at short intervals with five injections of a 20 per cent sodium chloride solution. Serious symptoms developed, but the patient overcame these. However, about one month after the injection treatment he died suddenly of embolism of the pulmonary artery. One case proves nothing, but one disaster is an indication for caution. (Jr. A.M.A. May 14, 27).

In animal experiments a concentration of oxygen of more than 70 per cent of one atmosphere may produce symptoms of oxygen want. The manifestations are drowsiness, anorexia, loss of weight, dyspnea, cyanosis and, finally, death. Postmortem examination showed that diffuse hemorrhagic edema had developed, with such injury to the diffusion membrane of the lung that, in spite of the increased head of pressure, the arterial blood remained unsaturated. With this knowledge of the effects of over rich oxygen mixtures, oxygen may be used to greater advantage therapeutically. (Jr. A.M.A., May 14, '27).

The ideal procedure in the case of a child exposed to scarlet fever is to make a skin test to determine whether the child is susceptible or immune to scarlet fever and at the same time make nose and throat cultures to learn whether the child is infected with hemolytic streptococci. If the skin test is entirely negative, further preventive measures are not indicated unless the culturs show the presence of hemolytic streptococci, in which case the child should be kept away from other susceptible children. In case the skin test is positive, the next step depends on the results of the nose and throat cultures. If these are negative and further exposure can be avoided, active immunization with toxin should be begun at once. If the skin test and the nose and throat cultures are positive, the administration of a prophylactic dose of scarlet fever antitoxin is justified. (Jr. A.M.A., May 14, '27).

While physicians understand that a germicide may produce effects an on infected area in a brief period which can be produced by an antiseptic only through prolonged contact, the general public understands these terms as synonymous. In consideration of this condition, the U. S. Bureau of Chemistry, which is charged with the enforcement of the Food and Drugs Act has recently come to the conclusion **that** the term "antiseptic" when used in the labeling of a medicinal product is objectionable unless the preparation when used as directed will actually destroy micro-organisms . The medical profession will, of course, agree at once that the position taken by the Bureau of Chemistry is in the public interest. (Jr. A.M.A., April 30, '27).

Improved Urethral Syringe

F. A. VAN BUREN, M.D., San Antonio, Tex.

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Some years ago I devised a long, slender barrel syringe for treatment of the female urethra. This instrument became very popular and was useful to those doing gynecology and urology. It may be used also as a uterine syringe.

Recently I devised another model, for the female urethra and bladder only. It has a capacity of about 30 cc. of fluid, a longer curved conical tip reaching the bladder, and eccentrically placed so as not to interfere with a vaginal speculum if used. Slight pressure prevents the return of the liquid.

These syringes are always in working order; they have the non-filling bulb, and are easily cleaned and sterilized. They are manufactured through the courtesy of Becton Dickinson & Co., makers of the "Asepto" line.

Proceedings of the Sixty-First Annual Meeting of the Kansas Medical Society, Held at Hutchinson, Kan., May 3, 4, and 5, 1927

MEETING OF THE HOUSE OF DELEGATES

The House of Delegates met in the Assembly Room of the Masonic Temple at 8 p.m. The minutes of the last meeting, having previously been published in the Journal, were, on motion dispensed with.

SECRETARY'S REPORT

To the House of Delegates, Kansas Medical Society: I desire to make the following report for the year ending May 1, 1927:

Balance on hand May 1, 1926:		
Medical Defense	$5059.52	
General Fund	7297.64	
Total		$12,357.16
Cash received from all sources for year ending May 1, 1927:		
Dues from members	6795.00	
Total Cash		6795.00
Total		19,152.16
Expended:		
Medical Defense	2007.13	
General Fund	4874.21	
Total Expenditures		6881.34
Balance		12,270.82
Standing of Funds:		
Medical Defense	5770.39	
General Fund	6500.43	12,270.82

Our membership of 1,375 is practically the same as it was last year at this time. However, at the end of the year, December 31, 1926, we had a total membership of 1521; which means that the remaining dues of about 140 doctors must be collected if we are to reach the goal of last year.

While our Constitution and By-laws say that all dues must tbe paid by February 1, the dues are coming in intermittently throughout the year. Our records show that there are 192 doctors who were in good standing last year who have not paid their dues for 1927. We have checked the Councilor Districts and find that the numbers of those who have not remitted for this year are as follows:

1st Dist., 9; 2nd Dist., 19; 3rd Dist., 20; 4th Distt., 22; 5th Dist., 29; 6th Dist., 57; 7th Dist., 12; 8th Dist., 5; 9th Dist., 12; 10th Dist., 0; 11th Dist., 4 and 12th Dist., 3. Total, 192.

There may seem a discrepancy to you in the number of those whose dues must be paid to total that of last year and the number our roster shows who were in good standing last year but who are in arrears for 1927, but the difference is made up of new members in the Society.

We have written the secretaries of the county societies, giving them a list of the delinquents and urging them to make a determined effort to collect the dues. Also, asking them if they had made any mistakes in reporting those in arrears, or if any had moved or died, to advise us of the fact. Many of the secretaries have responded and assured us they would make the effort to collect from the delinquents and many dues have been remitted since our letters were sent out. So we feel quite hopeful that by the end of 1927, with the co-operation of the secretaries and councilors, our membership will equal or exceed that of 1926.

This is my tenth year as secretary of your Society and never during my time of service has there been but one auditing of my books. I have brought my records with me and I recommend and urge that a careful examination be made at this time by your Finance Committee in accordance with Section 5, ,Chapter VII of your By-Laws.

Also, during my term of office there has never been such a generous and spontaneour request for papers for the program as of this year. We appreciate the co-operation of the secretaries and wish to express our thanks to the members who have contributed to the success of the program.

To our distinguished and honored guests who have traveled these many miles giving of their time and talents for our pleasure and profit we give our heartiest thanks.

We cannot adequately thank our President Dr. Earle G. Brown for his ready and willing assistance at all times but we do feel most grateful to him.

Respectfully submitted,

J. F. HASSIG, Secretary.

Report accepted and filed.

TREASURER'S REPORT

To the House of Delegates, Kansas Medical Society:

As Treasurer of this Society, I desire to make the following report for the year ending May 1, 1927:

Balance on hand May 1, 1926:		
Cash balance on hand May 1, 1926		$6,071.31
Liberty Bonds, all registered in the name of George M. Gray, Treasurer of Kansas Medical Society, or his successors at 4½%		6,000.00
Certificates of deposit in Riverview State Bank in the name of George M. Gray, Treasurer of Kansas Medical Society or his successsor, at 6%		2.000.00
Total Cash and Assets		14,071.31
May 1, 1927:		
Cash balance in bank		6,839.97
Liberty Bonds		6,000.00
Certificates of Deposit		2,000.00
Total Cash and Assets		14,839.97
1926 Total		14,071.31
Difference		768.66

1927 Expenditures:

Defense Fund	$2,007.13	
General Fund	4,874.21	
	6,881.34	

Resources:

Cash received from dues and turned over to me by Secretary	7,335.00
Interest from Bonds and Certificate of Deposit	315.00
Total Cash Received	7,650.00
Balance May 1, 1926	6,071.31
Total	13,721.31
Expenditures	6,881.34
May 1, 1927—Balance in Bank subject to check	6,839.97

Expenditures for year from May 1, 1926 to May 1, 1927:

GENERAL FUND

Voucher No.	Payee	Amount
113	H. W. Orr, Lincoln, Guest	$ 22.24
114	W. H. Cole, St. Louis, Guest	32.45
115	J. P. Greenhill, Chicago, Guest	42.08
116	E. E. Gillespie, Registration	10.00
117	Dr. F. A. Carmichael, Steno., Stamps	25.00
118	Dr. W. E. McVey, Editor	1800.00
119	Dr. J. F. Hassig, Secy's Ex. Acct.	990.00
120	Dr. E. E. Liggett, Necrology Rep't.	6.75
121	Hotel Grund, Secretaries Luncheon	12.33
122	Murray Co. Elec Mach. at State Meet.	1.25
123	Dr. H. C. Goodson, Colo. Spgs., guest	65.81
124	Lowe Printing Co	5.10
125	Dr. O. P. Davis, Ex. Com. Kan. City	9.50
126	Am. Med. Assn. Membership Cards	6.75
127	Dr. J. F. Hassig, Secy's Exp. Acct.	727.91
128	Dr. F. A. Carmichael	4.00
129	Dr. Earle G. Brown	8.00
130	Dr. S. Murdock	13.75
131	Dr. P. S. Mitchell	16.63
132	Dr. O. P. Davis	8.80
133	Dr. J. T. Axtell	25.86
134	Dr. E. S. Edgerton	23.82
135	Dr. C. C. Stillman	6.50
136	Dr. Alfred O'Donnell	10.00
137	Dr. D. R. Stoner	42.20
138	Dr. C. H. Ewing	21.70
139	Dr. W. F. Fee	46.00
140	Kansas Bankers Assn., Bonds	7.50
141	W. E. McVey, Bur. Pub. Rel.	251.51
142	W. E. McVey, Bur. Pub. Rel.	292.18
143	Fields, Florist	21.00
144	W. E. McVey, Bur. Ppb. Rel.	181.91
146	St. Louis Button Co.	19.28
147	Evans Press, Programs, Stat'y	96.50
148	O. P. Davis, Ex. Meeting, Kan. City.	9.25
		4,784.21

DEFENSE FUND

Voucher No.	Payee	Account
72	Thos. G. Orr	26.10
73	O. P. Davis, Salary, Stamps	80.00
74	J. D. M. Hamilton, Salary etc.	103.25
75	J. D. M. Hamilton	75.00
76	J. D. M. Hamilton	95.55
77	O. P. Davis	75.00
78	J. D. M. Hamilton	95.00
79	J. D. M. Hamilton	127.20
80	J. D. M. Hamilton	130.71
81	O. P. Davis, Salary	75.00
82	J. D. M. Hamilton	242.47
83	J. D. M. Hamilton	238.84
84	O. P. Davis	75.00
85	J. D. M. Hamilton	150.00
86	J. D. M. Hamilton	147.08
87	J. D. M. Hamilton	270.93
		2,007.13

Respectfully submitted,
GEORGE M. GRAY, Treasurer.

Accepted and placed on file.

REPORT OF MEDICAL DEFENSE BOARD 1926-1927

The Medical Defense Board begs to submit the report of its operations during the past year—the sixteenth year of its activities. The Attorney's report is also subjoined, and a condensed statement of the expenditures of the Board.

It will be seen, by referring to the report of the Attorney, that there is a slight shrinkage of the number of cases on hand, as compared with the preceeding report. However, there is usually the accession of a new case to replace every one disposed of. The activities and usefulness of the Board should not be judged wholly by the cases that are filed or that come to issue. There are numerous threats of suits which harass our members and make necessary much correspondence. We feel that the existence and potentiality of our defense plan deters many prospective litigants from actually carrying their threats into execution. It has been our theory, all along, that a considerable benefit to be derived from mutual defense is the prevention of suits.

It will be seen that the expenditures during the past year are $27.10 less than for the preceding year. While this is only a slight difference it is better than the progressive increase that was apprehended.

The Board notes a spirit of friendly cooperation being manifested by certain companies engaged in the indemnity business, in cases where we are mutually interested. This is gratifying, for it leads to a consolidation of effort and tends to lessen expense.

We regret that the attitude of our members, instead of being unanimously friendly and loyal to this defensive arm of the Society, ranges all the way from indifferent apathy to a vindictive antagonism. This has always been the case since the inception of the plan. It will probably continue to the end. The lack of unity in the medical profession on matters of obvious importance is a regretable characteristic.

The Board has suffered the recent grievous loss of one of its members. Dr. D. R. Stoner, for many years a member of the Board, died suddenly April 17, at his home in Ellis, Kansas. He was a man of strong personality, sterling character, great energy and high capability. His association with this Board was most happy, and his council was always timely and good. We, his colleagues, who survive him, sincerely mourn his untimely death.

Respectfully submitted,
O. P. DAVIS, Chairman.

DEFENSE FUND EXPENDITURES—1926-1927

Voucher No.	Payee	Amount
73	O. P. D. Sal. Feb. March, Apr. $75.00 Postage, $5.00	$ 80.00
74	J. D. M. H. Sal. P. D., Exp.	103.25

75	J. D. M. H. Sal.	75.00
76	J. D. M. H. Sal. P. D., Exp.	95.55
77	O. P. D. Sal. May, June, July	75.00
78	J. D. M. H. Sal. and P. D.	95.00
79	J. D. M. H. Sal. P. D. and Exp.	127.20
80	J. D. M. H. Sal. P. D. and Exp.	130.71
81	O. P. D. Sal. Aug. Sept. Oct.	75.00
82	J. D. M. H. Sal. P. D. and Exp.	242.47
83	J. D. M. H. Sal. P. D. and Exp.	238.84
84	O. P. D. Sal. Nov. Dec. Jan.	75.00
85	J. D. M. H. Salary (2 mo.)	150.00
86	J. D. M. H. Sal. P. D. and Exp.	147.00
87	J. D. M. H. Sal. (2 mo.) P. D., Exp.	270.93
Total		$1,981.03

DEFENSE FUND EXPENDITURES—13 YEARS

1915	$1,254.95
1916	1,189.27
1917	777.45
1918	809.58
1919	759.41
1920	1,245.51
1921	1,458.35
1922	1,236.08
1923	1,310.96
1924	1,479.76
1925	1,970.04
1926	2,008.13
1927	1,981.03
Total,, 13 years	$17,480.52
Average per year	1,344.65

REPORT OF ATTORNEY FOR MEDICAL DEFENSE BOARD FOR YEAR 1926-1927

I am enclosing herewith a summary of cases which have been presented to me through your board for my consideration. The report covers a period from May 1, 1926 to April 1, 1927. At the time of the compiling of the report there were twenty-two cases being carried in my files as compared with twenty-four in the report submitted to you in 1926.

During the past year four cases have been actually presented for trial and of these three have resulted in judgements for the defendant and one case resulted in a verdict for the plaintiff in the nominal sum of $69.40. In addition to these cases, two cases were dismissed with prejudice to the plaintiff for want of prosecution. There are now eleven cases that are at issue and ready for trial and two cases pending on preliminary motions.

This report is respectfully submitted for your approval.

J. D. M. HAMILTON, Attorney.

SUMMARY OF CASES—MEDICAL DEFENSE BOARD

May 1, 1926—April 1, 1927

1. Smock vs. Dr. L. A. Corwin and Dr. W. G. Bouse, failure to properly reduce and treat fracture of femur, filed April 25, 1924, for trial.

2. Howard vs. Dr. J. B. Musick, negligent use of insulin, filed November 22, 1924. Dismissed with prejudice to plaintiff.

3. Parish vs. Dr. W. T. McKay and Dr. Ernest S. Day, failure to properly reduce and treat fracture of tibia, filed February 11, 1924. Defendant's demurrer to evidence sustained and judgment entered for defendant.

4. Barrett vs. Dr. A. Bennie, negligent puncture of bladder during childbirth, filed February 6, 1925. Dr. Bennie died during the pendancy of the case and it has never been revived or an administrator appointed.

5. Serbs vs. Dr. J. A. Hull, failure to properly reduce and treat fracture of the radius, filed April 15, 1925, dismissed for want of prosecution.

6. Schmitt vs. Dr. C. F. McNair, improper prescription of cyanide of mercury resulting in death, filed April 15, 1925, verdict for defendant. Plaintiff's motion for new trial overruled.

7. LaTourette vs. Dr. G. M. Liston, failure to properly diagnose and reduce a fracture of the astragalus,filed April 24, 1925, ready for trial.

8. Teel vs. Dr. Walter J. Singleton and Dr. W. J. Lowis, negligent reduction of fracture of radius, filed June 16, 1925, defendant's demurrer sustained and judgment entered for defendant. Plaintiff's motion for new trial has never been presented to the Court.

9. Bangert vs. Dr. C. A. Cave, negligent refusal to treat, filed July 24, 1925, at issue. Ready for trial.

10. Dr. W. J. Stewart vs. Wright, action brought for services. Defendant filed cross petition setting up negligent treatment of fracture of semi-lunar notch, filed July 28, 1925. Tried to Court and Jury and verdict for defendant upon his cross petition for $69.40. Appealed to Supreme Court of Kansas.

11. Schmidt vs. Dr. F. G. McEwan and Dr. L. D. Johnson, negligent appendectomy. Filed November 16, 1925, at issue.

12. Bennett vs. Dr. G. E. Kassebaum and Dr. J. C. Bunten, negligent reduction of fracture of tibia, filed November 21, 1925, pending on preliminary motions.

13. Strode vs. Dr. W. T. McKay, improper treatment of injured tibia, filed February 11, 1926. At issue, ready for trial.

14. Tuttle vs. Dr. F. P. Wesley, improper reduction of fracture of the radius. For trial.

15. Heaton vs. Dr. F. W. Huddleston, negligent use of old catheter resulting in leaving a portion of catheter in bladder. Filed May 17, 1926, dismissed with prejudice to plaintiff.

16. Updegraff vs. G. R. Gage, Hall and Dr. Quiring, negligent use of gas, resulting

in death of patient. Filed July 15, 1926. Verdict for defendants.

17. Thomas vs. J. A. Bundy, illegal abortion. Filed December 1, 1926. Ready for trial.

18. Young vs. Dr. R. W. Moore, negligent failure to diagnose dislocation of arm at elbow. Filed October 11, 1926. Ready for trial.

19. Naugle vs. Dr. G. W. Allaman, failure to take x-ray picture of a fracture of the radius and to properly reduce fracture. Filed July 24, 1926, ready for trial.

20. McMillan vs. Dr. Frank Foncannon, failure to properly diagnose and treat fracture of the radius. Filed November 10, 1926. At issue, ready for trial.

21. Cooper vs. Dr. J. A. Bundy and Dr. Willard Brown, action for negligently producing burn while using fluroscope. Filed April 9, 1926. At issue, ready for trial.

22. Smith vs. Dr. R. C. Harner, failure to properly reduce and treat Colles fracture. Filed March 21, 1927. Pending on preliminary pleadings.

COUNCILORS' REPORTS

A motion was made that the reports of the Councilor's be not read but be incorporated in the minutes of the meeting and be published in the Journal.

1st District: Dr. S. Murdock, Jr., Sabetha, Councilor—no report received.

2nd District; Dr. L. B. Spake, Kansas City, Councilor, gave the following report; The county societies of second district are in excellent condition. Ottawa County has had regular meetings, chaperoned by a Tuberculosis clinic, has conducted county wide Toxin-anti-toxin campaign, and had one joint meeting with Anderson County. Anderson County is very active and has regular meetings. Miami, Coffey and Linn Counties are not as active as other societies. Leavenworth and Douglas counties hold regular meetings. Wyandotte county activities for the past year are as follows; Entertained the State Society, held regular meetings twice each month, co-operated with Kansas City Clinical Society and Jackson County Society in holding clinical meetings at the different hospitals in Kansas City, Kansas. I want to congratulate the secretaries of the different county societies for the work they have been doing, because they hold the most important position in the Society and can make county meetings interesting and beneficial to all.

Suggestion for 2nd District for ensuing year: The periodic health examination is one of the foremost in the minds of the laity today. They are being educated to the fact that vaccination vanishes small pox; anti-toxin, diphtheria, etc. Periodic examinations will be forced on us and we must meet it. First, the family physician is the only logical man to make the examination, but the trouble with a certain per cent of men doing general practice is that by habit they do not make complete examinations, so we recommend to the incoming councilor that clinics be held by men in their own community on their own patients, with an adviser to help in the examination, so that all of the medical profession can be fit to carry on the examination for the betterment of their patients and not have it said that the medical profession is not competent to make a complete physical examination of a patient.

La Vern B. Spake, Councilor.

3rd District: Dr. P. S. Mitchell, Councilor, Iola, gave the following report:

To the President and Council of Kansas Medical Society: I beg leave to submit the following report on the condition of the Third Councilor District. All the counties are organized and on a working basis except Chautauqua, which has but five members of the profession. The question of validity of practice of a physician arose in Chautauqua County. This was referred to the Secretary of Medical Registration, where, I presume, it was settled as I heard no more of it.

Dr. Harner of Howard, Elk County, was sued for alleged bad results in a Colles fracture. The case is pending and I understand is well in hand.

Everyone seems to be in harmony. A joint meeting of the Allen-Neosho County Societies was held at Chanute, April 28th, in an effort to rehabilitate the old Southeast Kansas. A good attendance was obtained . It was strictly a close corporation meeting as many felt good home talent papers could be produced as well as from abroad. After the scientific program was over a motion was made to reorganize the old Southeast Kansas Medical Society. This was carried vigorously and with unanimity. Dr. L. D. Johnson of Chanute was elected President and Dr. P. S. Mitchell of Iola, was elected Secretary-treasurer. They were instructed to arrange a program and institute first meeting which will be held some time the latter part of May. We hope much will be heard from this society in a medical way. No by-laws were written and no attempt at professional regulation will be made other than eligibility to the

State Society, its purpose being strictly scientific effort.

4th District: Dr. O. P. Davis, Topeka, Councilor, submitted the following report: The report for the past year, except for details, is very similar to those of several preceding years. This district comprises the counties of Shawnee, Wabaunsee, Geary, Osage, Morris, Lyon and Chase. With the exception of Geary, all these counties go to make up Shawnee County and Lyon County Societies, according to the accessibility of the one or the other to the physicians of a given locality. Thus have grown up two strong societies in a territory which would otherwise have been served by several weak and inefficient organizations.

The Shawnee County Society has a paid up membership of 135, in addition to three emeritus members. This membership is derived from the following counties: Shawnee, Osage, Wabaunsee, Jefferson, Jackson and Pottawatomie. During the year seven new members were received, all from Shawnee county. Nine members were lost during the year, as follows: three transferred and six suspended for non-payment of dues. There have been held ten regular meetings with an average of fifty-one, and one special meeting with an attendance of forty-five.

The Lyon County Society has a paid up membership of thirty-five, derived from Lyon, Greenwood, Osage and Chase counties. No new members have been added and none lost during the year. Twelve regular meetings have been held and no specials. The average attendance at the meetings was twenty-five.

Both these societies are thus seen to be in a flourishing condition, having regular, well attended meetings, with efficient officers supported by a strong membership.

O. P. DAVIS, Councilor.

5th District: Dr. J. T. Axtell, Newton, Councilor, made the following report: The medical societies in the Seventh District, I am happy to report, are all in a flourishing condition. I have been able to visit most of them and I was heartily welcomed and royally entertained at each place, this has been done without expense to the State society.

Marion, Pratt, St. John, Hutchinson, Great Bend and Sterling are especially to be commended for their good medical societies. Some of the western counties find it more convenient not to hold county meetings but go to the larger centers where they can have better meetings.

The Seventh District Medical Society is attracting doctors from long distances and the meetings are especially well attended and instructive.

Respectfully submitted,

J. T. AXTELL, Councilor.

6th District: Dr. E. S. Edgerton, Wichita, Councilor, submitted the following report: Of the ten counties making up the Sixth District, all are organized and hold meetings, with the exception of Barber, Greenwood, Clark and Comanche. The membership of these counties is so small and scattered that it is impossible to keep up a working organization. Several of the members in these counties however, attend the meetings of other adjacent county societies.

Sedgwick County is the largest county in the district, having a membership of one hundred and forty and for the past year has had some very excellent programs at their meetings, provided both by outside guests and local men. A new feature in the work of this society is the holding of a monthly clinic, the day time being devoted to operative and bedside clinics and the evening to a dinner and scientific discussions.

Kingman County has had a very active year. One feature of which has been the administration of toxin anti-toxin to 2500 people in their county. This, of course, has been in co-operation with the State Board of Health. In October, the Kingman County Society entertained about fifty members of the profession at the Seventh District meeting. Also, this society has sponsored public health talks before the Chamber of Commerce of Kingman and these have been well attended.

Harper County has recently re-organized and promises to hold regular meetings which should mean a great deal for the members in that section.

Sumner County continues to be a very active and busy society.

Cowley and Butler are both live organizations and hold regular meetings. I have been able, during the past year, to visit most of the component societies and at this time I feel that this district is in better condition than I have known it during my term as councilor.

E. S. EDGERTON, Councilor.

7th District: Dr. C. C. Stillman, Councilor. No report received.

8th District: Dr. Alfred O'Donnell, Ellsworth, Councilor, reported as follows: The Eighth District is made up of the counties

of Lincoln, Ellsworth, Ottawa, Saline and Dickinson.

Saline County Medical Society is the largest county society in the district; holds monthly meetings from September to June. Number of doctors in the county, eligible but not members, two. Has thirty-two members.

Dickinson County Medical Society has twenty-one members. Holds meetings every third Thursday in April, July, October and January. There are six doctors in the county who are eligible but not members.

Lincoln County Medical Society has seven members, not active at present. Last meeting May ,1926.

Ottawa County Medical Society has nine members, holds regular monthly meetings at the homes of the different members.

Ellsworth County has eight medical men, all members of the Central Kansas Medical Society and State. Ellsworth County forms part of the Central Kansas Medical Society with Russell, Ellis and those other counties, forming the old Tri-County Society.

Central Kansas Medical Society holds meetings quarterly—well attended and active. A number of doctors carry liability insurance in either the Ft. Wayne or Aetna.

The per cent is as follows: Saline County 90%; Dickinson County, 90%; Ellsworth County, 100%; Ottawa County, ——; Lincoln County, 90%.

ALFRED O'DONNELL, Councilor.

9th District: Dr. C. S. Kenney, Norton, Councilor, reports as follows: I beg to make this report for the 9th Councilor District, comprising the counties of northwest Kansas.

We have two active societies, the Smith County, composed of the doctors in that county, and the Decatur-Norton County Society, composed of the physicians in the balance of the district. A very large percentage of the eligible physicians are members of either one or the other society.

The Smith County Society meets on call and the Decatur-Norton County Society meets at the call of the president and secretary, quarterly. It has been the idea to have some outstanding man on each program and the balance filled by local men. Both societies are in splendid condition and we feel there is a mighty fine feeling among the various physicians in the district.

Respectfully submitted,

C. S. KENNEY, Councilor.

10th District: Dr. D. R. Stoner, Ellis, Councilor, no report received.

11th District: Dr. C. H. Ewing, Larned, Councilor, no report received.

12th District: Dr. W. F. Fee, Meade, Councilor, submitted the following: To the President and Councilors of the Kansas Medical Society: As Councilor for the 12th District I wish to make the following report: Meade-Seward Medical Society is functioning and holding regular meetings. All eligible doctors in both Meade and Seward counties are members of the society, all have paid their dues with one exception and he keeps saying that he will, but up to date has not done so.

Ford County Medical Society at Dodge City has eighteen members and is in a good healthy condition. All of the eligible men in that county belong to the society, with one exception, and he, because of age, retired from active practice about twenty years ago. Under these conditions Ford County can claim 100 per cent membership in both county and state societies, all being members in good standing in the state society.

Finney County Society is not doing as well as formerly, owing to lack of interest on the part of some of the members and not attending the meetings. Also, some of the men who attended from other counties have either moved or have lost interest in the society and do not attend as well as formerly.

I have taken the matter up with the secretary of the society and I plan to visit them this coming year and see what can be done in the way of stimulating this society to greater activity, and I will try to get some of the men from out-lying districts to attend and take some active part in that society.

I do not think the raise in dues has had any effect on reducing the membership in any way, nor have I heard any complaint along this line.

Respectfully submitted,

WM. F. FEE, Councilor.

REPORT OF BUREAU OF PUBLIC RELATIONS

In pursuance of a suggestion made by the President in his address at the last annual meeting of the Society, a committee was appointed to prepare plans for the establishment of a Bureau of Public Relations and the Executive Committee of the Council was empowered to act upon the report when it should be made. On August 18th, a meeting of the Executive Committee was held and the report of the committee submitted. With slight modification the report was approved and the establish-

lishment of the Bureau of Public Relations was authorized. The activities of this Bureau were outlined in a general way, to provide lectures for public meetings; educational propaganda through the newspapers and otherwise; co-operation with the Board of Health in the preparation of publicity, securing statistics, etc; planning and organizing campaigns for improved legislation.

It was also provided that the Bureau should be under the management of a governing board to be composed of the Executive Committee of the Council and the chairman of the three standing committees; and that the bureau should be operated from the office of the Journal and that the editor of the Journal should be the executive secretary.

Immediately after the meeting of the Executive Committee of the Council the secretaries of the county societies were notified of the organization of the Bureau and the plans that had been outlined for its work; and information was asked in regard to the civic clubs that might be utilized for public lectures and the newspapers that might be used in the educational campaign. It was definitely stated that all such public lectures should be conducted under the auspices of the county societies. Efforts were then made to secure a sufficient number of men willing to prepare and deliver such lectures. After considerable correspondence we were able to announce a list of speakers that would respond to such calls as might be received.

The list was mailed to the secretaries of county societies and was also published in the Journal. Only a few of the societies have held public meetings, or at least only a few have requested the Bureau for lectures. Some of them have had lecture dates with civic organizations, but whether these were arranged by the county societies we are unable to say. It was thought best that all of such meetings should be arranged by the county societies, but it seems now that a successful issue of this plan may be more easily worked out by taking the matter up with the civic organizations directly.

The next problem was to interest the newspapers in regular contributions of short articles on medical topics and here we immediately found opposition. Some of the editors considered that we were simply trying to get some free advertising and refused to publish anything of ours except at space rates. Some of them were very courteous and seemed glad to have the articles. We have at this time forty-three papers in forty-two counties that have requested regular service and we are sending to these papers a short article every week. We hope to increase the number gradually, but at first we thought best to limit the service to one paper in each county. It has not been the purpose of these articles to try to teach the people how to diagnose their illnesses nor how to treat them, but to tell them things that are known about diseases and how they are known, to present the facts that are known in a convincing way. It is not possible to make any fight on the cults or to introduce any propaganda for our profession in these newspaper articles.

A fairly large per cent of the members seemed to think that a more direct attack should be made on the cults than could be made through the newspapers and with this in mind plans were made for the publication and distribution of a series of pamphlets in which a direct argument might be made for the superiority of scientific medicine. The first of this series of pamphlets, a sort of introductory to the real campaign that is to be made, has already been published. A question as to how it could best be distributed arose and a copy of the pamphlet was sent to each of the county societies and the secretary requested to send us a list of the people to whom it might be mailed from our office and also the number that each member of the society could distribute. The first edition was very soon exhausted and long before the second edition was off the press the requests amounted to four times the number we were able to print, with a limited appropriation. In some subsequent numbers of this series of pamphlets it is planned to discuss the subject of legislation and try to show the people why they should demand that all those who are permitted to treat the sick should be properly qualified to do so. It is very doubtful if the medical profession will be able to secure legislation that will be adequate, but a demand from the people will receive due consideration from members of the legislature. It is hoped that during the next two years some effective work may be done in this direction.

At the annual meeting of the Council a majority of the members of that body expressed the opinion that an attempt should be made to get a bill through the legislature then about ready to convene. The executive secretary of the Bureau was instructed to have such a bill prepared and introduced.

A few days after this meeting a copy of the "Basic Science Act" prepared by the Bureau of Legal Medicine of the A.M.A. was received. The proposed bill seemed to cover our requirements without antagonizing too greatly the opposing factors. It was submitted to each member of the Council and after receiving the approval of a majority of them, copies were prepared and given to the chairman of our Legislative Committee, who succeeded in getting the bill introduced in both houses of the legislature. A copy of the bill was published in the Journal and letters were sent out to members of the Society urging their support. There was no chance for it, however, and except for some friends it might have made, nothing was gained and no harm was done.

Letters were also sent out from the Bureau to the members in behalf of the appropriation for the Medical School. Fortunately, this went through but how much influence our efforts had in the final outcome is problematical.

W. E. McVEY, Executive Secretary

Report accepted and filed.

Statement showing expense of operating the Bureau of Public Relations of the Kansas Medical Society for the period of August 19, 1926 to and including April 30, 1927.

Stationery and Printing	$240.20
Postage	107.35
Clerk Hire	659.00
	1,006.00

The following resolutions endorsing the work of the Bureau of Public Relations were read and adopted:

WHEREAS, A most valuable work is being done by the Bureau of Public Relation of the Kansas Medical Society, through the furnishing of educational articles to newspapers, distribution of pamphlets to lay readers, and the furnishing of speakers on medical subjects, and

WHEREAS, It is important that proper educational materials should be distributed through the channels of the regularly organized profession,

THEREFORE BE IT RESOLVED, That this Society most heartily endorses the work of the Bureau of Public Relations and requests the various county medical societies and individual members to aid this important work in all ways possible.

The following resolution to be considered by the Committee on Public Health and Education was read:

WHEREAS, The membership of the Kansas State Medical Society has allowed their rights and prerogatives to lapse during the years gone by until we have allowed our State to be the dumping ground of all the various sects, cults and irregular practitioners known who have the legal right through unfair and biased legislation to practice medicine in any form without adequate supervision and control; and

WHEREAS, We in the past have pursued a policy of non-resisstance, turned the other cheek, been too proud to fight, and generally conscious of our superior qualifications have supinely allowed our regular profession to be strictly regulated in the vain hope that the ignorant and misled public would come to their senses and recognize the spurious claims and pretensions of the cultists to be as absurd as we knew them to be; and

WHEREAS, These practitioners of irregular medicine through their supreme ignorance and egotism are constantly committing throughout our state incidents of mal-practice and criminal negligence for which they should be called to account, both before the courts and at the bar of public opinion,

THEREFORE BE IT RESOLVED, That the House of Delegates and Councilors of the Kansas Medical Society recommend to the executive committee that a propaganda committee consisting of the President, Earle G. Brown, the Secretary, J. F. Hassig, and the Ex-President, F. A. Carmichael be appointed, and that a sum of $2500.00 be appropriated for their use, to be expended as they see fit, in assisting in the detection of instances of flagrant acts of ignorant and malicious malpractice committed by members of the irregular cults, assiting in their prosecution and publishing the results when secured to the public and profession of the State of Kansas. This fund shall be expended as they see fit and shall not be subject to audit or public explanation and when needed shall be replenished by the executive board.

Referred to the Committee on Public Relations.

REPORTS OF STANDING COMMITTEES

Committee on History made the following report: The Committee on History has to report that photographs of all the ex-presidents of the Society have been secured with the exceptions of Dr. John Parsons, who was elected in 1868, Dr. H. K. Kennedy, who was elected president in 1873, and Dr. J. H. Stuart, who was elected president in 1881.

We have life sketches of all except Dr. John Parsons and Dr. H. K. Kennedy. All we have been able to learn about Dr. Parsons is that he came from New York and located at Mt. Pleasant, the old site of which is near the town of Potter in Atchison County. He was admitted to membership in the Society at its annual meeting in April, 1867, and at this meeting reported two cases. He was elected president at the annual meeting in 1868. His name does not appear in the transactions of 1871, or subsequently. From information supplied by old residents of the community, he left suddenly under a cloud for parts unknown.

Dr. H. K. Kennedy joined the Society in 1867 and at that time registered from Ozawkie. He was elected president in 1873 and was then registered from Topeka. Have been unable to find anyone among the old residents who remembers him. He appears to have been at the annual meetings up to and including 1875, after which his name does not appear.

We have a sketch of Dr. J. H. Stuart furnished by himself in the late nineties. He was elected president in 1881 from Lawrence but moved to Minneapolis in February, 1882, where he was on the faculty of the Minneapolis College of Physicians and Surgeons. We have written several letters to Minneapolis but have been unable to secure any later data concerning him, or to locate any source from which a photograph might be secured.

The photographs and sketches have been carefully compiled and arranged in an album for the archives of the Society.

W. E. McVEY, Chairman.

Report accepted and filed.

Committee on School of Medicine: Dr. L. F. Barney, Chairman, made the following report:

Your Committee on the School of Medicine desires to report that the dark clouds which have hovered over the school for the past few years are rolling away and the dawn of a greater medical school appears on the horizon.

Considering the almost universal demand for retrenchment in taxes, the state legislature has been very kind and generous with us, for they have made appropriations of $100,000.00 for a new nurses home and $200,000.00 for a new hospital unit.

This victory is more far-reaching than the matter of new buildings and better facilities for teaching. Far greater than these are the effects they should produce in other ways.

1st. It should forever settle the location of the school. The Board of Regents and the Members of the Legislature have shown by this action that they favor keeping the school where clinical material is accessible and making it a school that will turn back to the state practical medical men rather than a pedagogical institution.

2nd. The appropriations for the medical school were separated from the appropriations for the university which is advantageous alike for the university and the school and is a precedent for future legislatures.

3rd. The new buildings will furnish facilities for larger classes during the last two years and allow a larger proportion of the freshmen and sophomores to complete their medical education, who formerly were denied this opportunity because of lack of facilities for teaching a greater number of junior and senior students as is required by the school standardization to continue a Class A School.

4th. By graduating more students it will return more and better qualified physicians to the state to help fill the ranks that have been rapidly depleted during the past few years.

5th. It will help to retain many of the better members of the faculty who have received tempting offers of teaching positions in the greatest and most progressive schools, and who were becoming discouraged with the slow progress of the school.

That our results have been attained only by the most tireless work all of you should know. The committee desires that you should know that the medical profession of the state has been almost unanimously behind the school. That the officers of the Kansas Medical Society, the faculty of the school, and especially the president and officers of the alumni, have worked ceaselessly and gone to considerable personal expense to attend meetings and communicate with influential powers to further the interests of the school.

In closing, the committee desires to express their gratitude for the help given by those mentioned above, by Senator Getty, who sponsored the cause in the senate, by Representative McGrew, who sponsored it in the house, by Senator Snyder and Representative Schoen, chairman of the Ways and Means Committee of their respective bodies, and the members of the legislature and laymen whose names are too numerous to mention, who worked so diligently in behalf of the school.

They would also remind you that the work has only begun, and to make this

school one of the greatest, which is has started out to be, will require the continuous efforts of all those who have been gathered together in its cause.

Respectfully submitted,

L. F. BARNEY, Chairman.
E. D. EBRIGHT.
J. T. SCOTT.
ALFRED O'DONNELL.
L. G. ALLEN.

Report accepted and filed.

Under the head of Unfinished Business, the following resolution, which according to our Constitution and By-Laws, was carried over from the last meeting of the House of Delegates for their consideration, was read:

RESOLVED, That Section 1, Article IV of the Constitution be amended by inserting after the word "President" in the second line of said section, and in place of the clause which now reads "three Vice-Presidents" the following: "a President-Elect and one VicePresident."

RESOLVED, That Article VI of the Constitution be amended by inserting after the word President in the first line of said article the following: "President-Elect."

The Resolution was unanimously adopted.

Under the heading of New Business, Dr. W. E. McVey presented the following resolution:

RESOLVED, That Section 1, Chapter IX of the By-laws be amended by inserting after the third paragraph of said section the following: "A committee on Stormont Library to be composed of three members, one of whom shall be a resident of Topeka."

RESOLVED, That the following section be added to chapter IX of the By-laws and be designated as Section 4:

The Committee on Stormont Library shall co-operatte with the State Librarian and advise said State Librarian as to the proper medical books and magazines to be purchased, as to the care and indexing of the same, and shall suggest such changes or improvements as will in their judgment make the Stormont Library of the greatest service to the medical profession of Kansas.

RESOLVED, That the present Section 4, Chapter IX of the By-laws be hereafter designated as Section 5 of said Chapter IX.

The above resolution was referred to the House of Delegates at the next meeting on Thursday, May 5, 1927.

Dr. C. C. Nesselrode advised the meeting that an invitation was to be extended to the American Medical Association to hold its Seventy-ninth annual session in Kansas City, Missouri. On motion this was unanimously indorsed and the delegates were instructed to use their influence and vote for Kansas City, Missouri, as the 1928 meeting place of the American Medical Association. The Secretary was instructed to wire the Secretary of the Oklahoma Medical Society suggesting that they indorse the proposition and instruct their delegates to support same.

A motion was made that the President appoint two committees, each composed of three, to draw up appropriate resolutions concerning the death of Dr. B. F. Morgan and Dr. D. R. Stoner.

The following were appointed: Dr. O. P. Davis, Dr. E. E. Liggett and Dr. F. A. Carmichael to draw up the resolutions relative to Dr. Stoner. Dr. E. E. Liggett, Dr. C. C. Stillman and Dr. P. S. Mitchell, for Dr. Morgan.

On motion, another committee was appointed by the President to draw up a resolution expressing the appreciation of Kansas Medical Society for the able manner in which Reno County Medical Society has entertained the State Society.

The secretary read his expense account from January 18, 1927 to May 1, 1927, inclusive, with his salary for the past year, which amounted to $977.67. Salary :$600. Stenographer and miscellaneous, $377.67. Total, $977.67.

Meeting adjourned.

MEETING OF THE HOUSE OF DELEGATES

May 5, 1927, 8:30 a. m.

This meeting was held in the Red Cross Room of the Masonic Temple. After roll call the next order of business was the election of officers for the ensuing year.

The following officers were elected:

President-Elect—Dr. John A. Dillon, Larned;

Vice President—Dr. J. B. Carter, Wilson;

Treasurer—Dr. George Mr. Gray, Kansas City.

These Councilors were elected:

1st District—Dr. C. W. Reynolds, Holton;

2nd District—Dr. L. B. Spake, Kansas City;

7th District—Dr. C. C. Stillman, Morganville;

8th District—Dr. Alfred O'Donnell, Ellsworth;

10th District—Dr. I. B. Parker, Hill City, one year unfinished term.

On motion, the election of councilor for the ninth district was postponed for an-

other year, owing to the absence of Dr. C. S. Kenney.

STANDING OF THE COUNCIL

District	Councilor	Term Expires
1st	Dr. C. W. Reynolds, Holton	1930
2nd	Dr. L. B. Spake, Kansas City	1930
3rd	Dr. P. S. Mitchell, Iola	1928
4th	Dr. O. P. Davis, Topeka	1929
5th	Dr. J. T. Axtell, Newton	1929
6th	Dr. E. S. Edgerton, Wichita	1928
7th	Dr. C. C. Stillman, Morganville ..	1930
8th	Dr. Alfred O'Donnell, Ellsworth ..	1930
9th	Dr. C. S. Kenney, Norton, ...	1928
10th	Dr. I. B. Parker, Hill City	1928
11th	Dr. C. H. Ewing, Larned	1929
12th	Dr. W. F. Fee, Meade	1928

The resolution relative to Stormont Library which was presented at the previous meeting of the House of Delegates was adopted.

The following resolution relative to the death of Dr. D. R. Stoner was read and adopted by the House of Delegates:

The Kansas Medical Society has suffered a sad loss in the sudden death on April 17, of Dr. D. R. Stoner, at his home at Ellis. Dr. Stoner had long been an active, energetic members of this Society. He had served as councilor for the 10th District for thirteen years and he was faithful and diligent in the duties of this important office. His council was always wise and carried weight with his colleagues. He could be counted on with certainty to fulfill every duty incumbent on him.

To the many associates in the profession who knew him best he revealed a most happy and lovable disposition; cheerful, optimistic, broadminded and public spirited. He was a friend who served, rejoiced and sympathized with his many friends, according as circumstances and events presented. He gladly gave as well as received out of the fullness of a widely mutual friendship.

As a citizen he was wideawake, progressive, foresighted and generous. His life was lost in the performance of an unselfish, neighborly effort to save the life and property of others. This same spirit dominated his professional life. He did not live for himself alone but as a unit in the great body of men who live and die for others. Greater love hath no man than this.

For the purpose of permanent record in the archives of the Society and for the transmital to the members of his family, the following resolution, together with the foregoing preamble are therefore adopted:

RESOLVED, That the Kansas Medical Society sincerely deplores the death of Dr. Stoner, expresses its sense of grievous loss, cherishes the memory of his life, character and service and expresses heartfelt sympathy to the bereaved family.

O. P. DAVIS,
E. E. LIGGETT,
F. A. CARMICHAEL,
—Committee.

The following resolutions, relative to the death of Dr. Benjamin F. Morgan, were adopted:

WHEREAS, Dr. Benjamin Franklin Morgan departed this life on February 28, 1927, at his home in Clay Center, Kansas, and

WHEREAS, The wife and family have lost a devoted husband and father, the community in which he resided, a loyal, public spirited citizen, who was always interested in the welfare of the people with whom he was associated and in the progress and betterment of the town and community in which he lived, and

WHEREAS, Dr. Morgan was devoted to his profession and keenly interested in the advancement of the science of medicine,

THEREFORE BE IT RESOLVED, by the Kansas Medical Society in its sixty-first annual session, That, in the death of Dr. Benjamin F. Morgan, it has lost one of its most devoted members, one who ever had the best interest of the organization at heart and that our Society extend to Mrs. Morgan and family our heartfelt sympathy, and,

BE IT FURTHER RESOLVED, That these resolutions be incorporated in the minutes of the meeting and that a copy be sent to the family of Dr. Morgan.

The following resolution was adopted by the House of Delegates and ordered read before the Scientific Session:

BE IT RESOLVED, That a vote of thanks be extended to the Reno County Medical Society for the very excellent accomodations for this meeting, for the entertainment provided, and for the enthusiastic efforts of the members of Reno County Society to make this meeting a success.

W. E. MCVEY,
IVAN B. PARKER,
ALFRED O'DONNELL, Committee.

A motion was made by Dr. Alfred O'Donnell and seconded, that the salary of the Secretary be increased to $1200.00 per year. This was referred to the Council for its consideration.

Dr. George M. Gray, treasurer, explained the financial condition of the Society and estimated since the establishing of the Bureau of Public Relations, which was costing the society $200.00 additional, per month, that within another year the sur-

plus in the general fund would probably be wiped out and he made a motion that a budget committee, consisting of the President, Secretary and one other member of the Council be appointed and that they prepare a budget and report to the mid-winter meeting of the Council.

Motion carried.

Dr. W. E. McVey presented the following resolution:

That Section 1, Article 13 of the Constitution be amended by substituting $10.00 in the place of $5.00 in the fifth line of said section. This was referred to the 1928 meeting of the House of Delegates for its consideration.

Dr. Earle G. Brown presented the following resolution:

WHEREAS, Extensive diphtheria immunization programs have been conducted in Kansas over the past five years, and

WHEREAS, This preventive leaves no scar, no serious reactions follow its administration, the procedure is harmless and assures the person so immunized protection for life, and

WHEREAS, Because of extensive diphtheria control work, distinct progress is being made in reducing the morbidity and the mortality, and

WHEREAS, Because of these procedures, Kansas, in 1925 and 1926 has the lowest diphtheria death rate of any state in the registration area,

THEREFORE BE IT RESOLVED: That the Kansas Medical Society endorses unqualifiedly the use of toxin anti-toxin as a preventive against diphtheria, and

BE IT FURTHER RESOLVED: That this society urge the county medical societies as well as the individual members, to use all ethical measures to assist in these immunization programs to the end that diphtheria may be eradicated in Kansas.

Dr. Ross moved that the resolutions be adopted. Motion carried.

Meeting adjourned.

MEETING OF THE COUNCIL

The council of Kansas Medical Society met in the Rorabaugh-Wiley tea room on Tuesday, May 3, at 12:30 p. m. at a Dutch treat.

Meeting was called to order by the President, Dr. Earle G. Brown.

Those present were: Dr. Geo. M. Gray, Dr. P. S. Mitchell, Dr. O. P. Davis, Dr. J. T. Axtell, Dr. E. S. Edgerton, Dr. C C. Stillman, Dr. Alfred O'Donnell, Dr. C. H. Ewing, Dr. W. F. Fee, Dr. W. E. McVey and Dr. J. F. Hassig.

Dr. W. E. McVey, Editor of the Journal, submitted the following report:

To the Council of Kansas Medical Society:

The Editor of the Journal begs leave to submit the following report for the year ending April 30th, 1927.

FINANCIAL STATEMENT OF THE JOURNAL

Receipts:		
Advertising	$4,522.07	
Subsrip's—1600 members	3,200.00	
Sales and subscriptions	144.52	
Bureau Public Relations	1,006.55	
Other sources	24.85	
Accounts due	150.00	
		$9,047.99
Expense:		
Journal Printing	2,237.50	
Stock and Stationery	742.10	
Salaries and Wages	2,326.00	
Postage	189.32	
Bureau of Pub. Relations	1,006.55	
Miscellaneous	210.37	6,711.84
Earned		$2,336.15

ACCOUNT OF EDITOR WITH SOCIETY

Receipts:		
Advertising	$4,522.07	
Kan. Med. Society	1,800.00	
Sales and Subscriptions	144.52	
Bureau Public Relations	1,006.55	
Other sources	24.85	
Accounts due	150.00	
		$7,647.99
Expense:		
Journal Printing	$2,237.50	
Stock and stationery	742.52	
Salaries and wages	2,326.00	
Postage	189.32	
Bureau of Pub. Relations	1,006.55	
Miscellaneous	210.37	$6,711.84
		$ 936.15
Less accounts due and unpaid	$150.00	
Less deficit of 1926	196.55	346.55
		$589.60

Report accepted and filed.

Dr. McVey made a report of the Bureau of Public Relations and on motion, $200.00 per month was allowed to defray the expenses of the Bureau until the mid-winter meeting of the Council.

Meeting adjourned.

MEETING OF THE COUNCIL

The new Council met and organized in the Red Cross Room at the Masonic Temple on Thursday, May 5, 1927, at 10:30 a.m. The meeting was called by the President. The following members were present: Dr. Earle G. Brown, President; Dr. George M. Gray, Treasurer; Dr. L. B. Spake, Dr. P. S. Mitchell, Dr. O. P. Davis, Dr. C. C. Stillman, Dr. Alfred O'Donnell, Dr. C. H. Ewing, Dr. W. F. Fee, Dr. W. E. McVey and Dr. J. F. Hassig, Secretary.

It was decided to hold the next annual meeting in Wichita, the exact dates to be determined by the president and secretary.

A committee to audit the books of the secretary at the mid-winter meeting of the Council was appointed, as follows: Dr. O. P. Davis, Dr. Alfred O'Donnell, Dr. P. S. Mitchell.

Dr. W. F. Fee was elected a member of the Defense Board.

MEETING OF THE SECRETARIES

The usual meeting of the secretaries of the county societies was held in the French Room of the Rorabaugh-Wiley Tea Room, Wednesday, May 4, at 1:00 p. m., where a complimentary luncheon was served to the secretaries.

The following were present: Dr. Earle G. Brown, President, Topeka; Dr. C. A. Boyd, Hutchinson; Dr. C. E. Fisher, Lyons; Dr. W. C. Heaston, McPherson; Dr. J. W. Kelley, Louisberg; Dr. Warren F. Bernstorf, Pratt; Dr. J. T. Scott, St. John; Dr. O. W. Miner,, Garden City; Dr. E. G. Ganoung, Salina; Dr. J. R. Scott. Ottawa; Dr. H. M. Glover, Newton; Dr. W. J. Eilerts, Wichita; Dr. J. L. Wentworth, Arkansas City; Dr. E. H. Johnson, Peabody; Dr. W. E. McVey, Topeka; Dr. P. S. Mitchell, Iola; Dr. F. L. Depew, Howard; Dr. D. E. Bronson, Olathe; Dr. Malcolm Newlon, Lincoln; Dr. H. E. Haskins, Kingman; Dr. Geo. M. Gray; Dr. J. F. Hassig, Kansas City.

Interesting talks were made by Dr. Brown, Dr. McVey, Dr. Boyd, Dr. Fisher, Dr. Bernstorf, Dr. J. R. Scott, Dr. Glover, Dr. J. T .Scott, Dr. Eilerts, Dr. Newlon and Dr. Haskins.

Time being limited, the meeting was forced to adjourn after a very inspiring and profitable session.

GENERAL SESSION

The scientific session of Kansas Medical Society convened at the appointed hour in the Assembly Room of the Masonic Temple at Hutchinson, Kansas, on Tuesday, May 3, 1927, to listen to the previously announced subjects and the discussions thereof as presented by the guests and members of the Society.

PROGRAM

Accomplishments of Preventive Medicine—Dr. Earle G. Brown, Pres., Topeka.

Tribute to Dr. Benjamin Franklin Morgan—Dr. C. C. Stillman, Morganville.

Some Features in Medical Legislation—Dr. J. A. Milligan, Garnett.

Discussion opened by Dr. J. T. Axtell, Newton.

Appendix Problem—Dr. Jabez N. Jackson, Kansas City, Mo.

Discussed by Dr. Dean Lewis, Baltimore, Md.

The Family Doctor—the Surgeon and the Evaluation of the Referred Patient as a Risk—Dr. I. B. Parker, Hill City.

Discussion opened by Dr. O. A. Hennerich, Hays.

The Use of Iodized Oil in the Visualization of the Bronchial Tree—Dr. L. G. Allen, Kansas City.

Discussion opened by Dr. P. M. Krall, Kansas City.

The Care of Children in General Practice—Dr. Frank Neff, University of Kansas.

Discussion opened by Dr. Earl G. Padfield, Salina.

Diphtheria Control in Kansas—Dr. C. H. Kinnaman, Topeka.

Discussion opened by Dr. F. A. Trump, Ottawa.

Nephritis and Neprhosis in Children—Dr. Geo. E. Paine, Hutchinson.

Discussion opened by Dr. H. J. Duvall, Hutchinson.

The Differentiation and Diagnosis of Bone Lesions—Dr. Dean Lewis, Baltimore, Md.

Wednesday, May 4, 1927

A Case of Pyloric Stenosis with Enormously Dilated Stomach—Lantern Slides—Dr. F. A. Trump, Ottawa.

Discussion opened by Dr. J. A. H. Webb, Wichita.

Surgical Treatment of a Typical Hypertrophied Prostate—Dr. John L. Grove, Newton.

Discussion opened by Dr. W. M. Mills, Topeka.

Conduct of Labor—Dr. M. W. Hall, Wichita.

Discussion opened by Dr. J. D. Clark, Wichita.

Necrology Report—Dr. E. E. Liggett, Oswego.

The Fifth Nerve and its Reflexes—Dr. Albert H. Andrews, Chicago.

Suicides—Dr. Karl A. Menninger, Topeka.

Discussion opened by Dr. M. R. Smith, Halstead.

Coronary Occlusion—Dr. Clay E. Coburn, Kansas City.

Discussion opened by Dr. C. H. Chickering, Hutchinson.

The Use of Iodides in Goitre—Dr. V. E. Chesky, Halstead.

Discussion opened by Dr. E. L. Kalbfleish, Newton.

The Early Diagnosis of Clinical Pulmonary Tuberculosis—Dr. L. J. Moorman, Oklahoma City, Okla.

Post Operative Thrombo-Phlebitis—Dr. David W. Basham, Wichita.

Discussion opened by Dr. L. F. Barney, Kansas City.

Problems of Drainage in Vertebral Disease—Dr. Arthur Steindler, Iowa City, Ia.

Thursday, May 5th, 1927

Dermatological Clinic—Dr. Alfred Schalek, Omaha, Nebr.

Syphilis of the Stomach, with Case Reports—Dr. E. H. Terrell, Wichita.

Discussion opened by Dr. H. N. Tihen, Wichita.

Some Diagnostic Points in Thrombo-Angitis Obliterans—Dr. L. V. Hill, Kansas City.

Discussion opened by Dr. T. G. Orr, Rosedale.

Safety in Surgery—Dr. C. S. Newman, Pittsburg.

Discussion opened by Dr. Alfred O'Donnell, Ellsworth.

The Care of the Aged—Dr. J. S. Brewer, Minneapolis.

Discussion opened by Dr. M. O. Nyberg, Wichita.

The Minute Circulation of the Cerebro-Spinal Substances—Illustrated with Lantern Slides—Dr. J. T. Scott, St. John.

Discussion opened by Dr. W. F. Bernsdorf, Pratt.

Surgical Disease of the Biliary Tract—Dr. C. M. Embry, Great Bend.

Discussion opened by Dr. Marion Trueheart, Sterling.

Non-penetrating Wounds of the Abdomen—Dr. J. E. Campbell, Pratt.

Discussion opened by Dr. H. E. Haskins, Kingman.

J. F. HASSIG, Secretatry.

SOCIETIES

SEDGWICK COUNTY SOCIETY CELEBRATES

On Friday, June 10, over one hundred members of the Sedgwick County Medical Society held a golf tournament at the Crestview Country Club, Wichita. Thirty prizes were offered, to be competed for in various kinds of sport, but most of the time was devoted to golf.

The players were divided into three classes: the surgery class, general medicine class and the specialty class. Each doctor was allowed to choose his own class and the four lowest net scores in each division constituted the team for that class. The winning team was awarded the section trophy.

There were some fine scores registered in the championship divisions, with Dr. Dixon winning the president's cup, given for low gross, when he shot a fine 34, 2 under par. Dr. Edgerton with a 37, won second prize for low gross, and Dr. Padfield was third with Dr. Hall fourth. Dr. Baker won the low net on 18 holes with Dr. Davidson second. Several of the doctors won two or more prizes.

For the beginners there were also several prizes. Dr. R. O. Logsdon won first prize and Dr. Hibbard was second, with Dr. Warren third.

For those who did not wish to play golf there was horseshoe pitching, tennis and archery. To Dr. Will Carter went the horseshoe honors for which he was awarded a razor. In tennis Dr. Terrill proved supreme and received a beautiful floor lamp. Dr. Milton O. Nyberg received a leather collar and tie case for winning the archery contest.

Following the contests of skill, a banquet was spread at the club house and during the course of the dinner the various prizes were awarded.

STAFFORD COUNTY SOCIETY

Society met Wednesday evening, June 8th, at 8 p. m., at the residence of Dr. J. T. Scott, St. John.

There were in attendance at this meeting the following physicians: Drs. Bernstorf, Cochran, Campbell, Jenkins of Pratt; Truehart, of Sterling; Haskins, Springer, of Kingman; Wallace, of Belmont, all of whom were guests of the society, and the local members, Drs. F. W. Tretbar, J. J. Tretbar, T. W. Scott, W. L. Butler, Stafford; M. M. Hart, Hackscille, L. E. Mock, R. E. Stivison, J. T. Scott, St. John.

The program which appears below con tained numbers of interest to the public as well as physicians and the public was invited. The program was as follows:

1, Interpretation of X-Ray Films, Drs. Bernstorf and Cochran, of Pratt.

2. Bone Regeneration, Dr. H. E. Haskins, Kingman.

3. Diet, What to Eat and Why, Dr. J. T. Scott, St. John.

4. Refreshments—Served by Mesdames Mock and Scott, St. John.

5. How to Have a Better County Society—Discussed by all the guests.

The entire program was enjoyed by ev erybody and complimented highly. At its conclusion the refreshments seemed to fill a long felt want and for more than an hour formed an enjoyable part of the concluding get acquainted opportunity.

The Secretary was authorized to procure a copy of the American Medical Directory for the society.

Among the public guests may be men-

tioned Mr. and Mrs. R. Boyd Wallace, of Stafford; Mr. and Mrs. H. F. Sutton, Mrs. H. L. Uhl, Mr. and Mrs. Fred Howard, Mr. and Mrs. J. E. Kay, Mr. and Mrs. John Lill, Mr. and Mrs. O. O. Halbeck, Howard Halbeck, Harry Austin, Mr. and Mrs. J. N. Shaler, St. John; and M. F. Brown, Sterling.

Most of the physicians present were ac companied by their wives. One of the society members, Dr. W. L. Butler, Stafford, brought a bride and received congratulations and best wishes from the society.

This meeting was pronounced by all present the red letter meeting of the society. It will be followed by another public meeting on the evening of Wednesday, July 13th. The invitations for the May meeting contained the program given above and concluded with the following verse:

Lay aside all cares and worries,
Forget all about the knocks,
Spend an hour next Wednesday evening,
Shaking hands with other "Docs";
Do it now, there's no tomorrow,
Truthfully it has been said,
Just remember this injunction,
You will be a long time dead.

J. T. SCOTT, Secy.

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MEDICAL SCHOOL NOTES

Dr. Wahl was made Chairman of the Section of Pathology for the American Medical Association at its annual meeting in Washington, D. C., May 18, 19 and 20.

Dr. Ralph H. Major was a guest at the Illinois State Medical Society at Moline, Ill. ,June 1st. Dr. Major read a paper on "High Blood Pressure" and conducted a Teaching Clinic.

Dr. F. C. Helwig and Dr. Frank C. Neff, were recently initiated into Sigma Xi, which is an honorary scientific fraternity. Dr. Helwig has been elected to a membership in the American Society of Pathologists and Bacteriologists.

Dr. Dean Lewis talked to the Seniors of the Kansas University Medical School at St. Margarets Hospital, May 2nd. Dr. Lewis is head of the Department of Surgery at the Johns Hopkins hospital, Baltimore, Maryland. Dr. Lewis also talked to the Wyandotte County Medical Society on the evening of May 2nd. Several members of the medical school faculty were present.

Dr. Albert S. Welch read a paper before the Marion county Medical Society June 15th on "Frequency of Diseased Condition."

Kansas University celebrated its fifty-fifth annual Commencement June 6th. The following is the list of graduates from the Kansas University School of Medicine and their respective interneships for the coming year: Dr. William Hackney Algie, United States Navy; Dr. George Brandt Arnold, Kansas City General Hospital, Kansas City, Mo.; Dr. Ralph G. Ball, Bell Memorial Hospital, Kansas City, Kan.; Dr. F. F. Boys, Cincinnati General Hospital, Cincinnati, Ohio; Dr. Carl Henry Brust, United States Public Health Service; Dr. Kenneth Albert Davis, St. Luke's Hospital, Kansas City, Mo.; Dr. Hunter William Duvall, Colorado General Hospital, Denver, Colo.; Dr. Raymond Floyd Gard, Bell Memorial Hospitay, Kansas City, Kan.; Dr. Charles Frederick Grabske, Bell Memorial Hospital, Kansas City, Kan.; Dr. Buford Hartman, St. Francis Hospital, Wichita, Kan.; Dr. R. Farnsworth Huckett, St. Margaret's Hospital, Kansas City, Kan.; Dr. Obbo W. Johnson, St. Louis City Hospital, St. Louis, Mo.; Dr. Paul A. G. Johnson, Western Pennsylvania Hospital, Pittsburgh, Pa.; Dr. Archie Austin Jones, San Bernardino County Hospital, San Bernardino, Calif.; Dr. Donald A. Kendall, United States Public Health Service; Dr. Robert Cathcart Keys, Grasslands Hospital, Valhalla, New York; Dr. Hazen Leon Kirkpatrick, St. Mary"s Hospital, Kansas City, Mo.; Dr. Bertrand I. Drehbill, St. Louis Hospital, St. Louis, Mo.; Dr. Cecil George Leitch, Bell Memorial Hospital, Kansas City, Kan.; Dr. Carl N. Lindquist, Halstead Hospital, Halstead, Kan.; Dr. John Merritt McGrew, St. Francis Hospital, Wichita, Kan.; Dr. Willis H. McKean, Western Pennsylvania Hospital,, Pittsburgh, Pa.; Dr. John McLeod, Long Island Hospital, Boston, Mass.; Dr. Otto Jack Printz, Kan sas City General Hospital, Kansas City, Mo.; Dr. Norris L. Rainey, St. Francis Hospital, Wichita, Kan.; Dr. Frances Eulalia Rosenthal, Children's Hospital, San Francisco, Calif.; Dr. Joseph George Schnebly, United States Navy; Dr. Thomas H. Smith, Kansas City General Hospital, Kansas City, Mo.; Dr. Charles William Stelle, United States Navy; Dr. Ward White Summerville, Bell Memorial Hospital, Kansas City, Kan., Dr. Anna Marie Wenzel, Postgraduate work in Anesthesia.

After the close of their Internships at Bell Memorial Hospital Dr. F. H. O'Don-

nell has accepted a residency at Dr. Crile's Hospital, Cleveland, Ohio, and Dr. J. H. Danglade has accepted a Residency in Medicine at Johns Hopkins Hospital under Dr. Barker. Drs. C. H. Brady, P. F. Hunt, and E. H. Dellinger will take up general practice.

DEATHS

William H. Van Meer, Longton, Kansas, aged 72, died February 7 of carcinoma of the rectum. He graduated from the Kansas City Homeopathic Medical college in 1890.

Flavius Rollo Smith, Winfield, aged 64, died in March of cerebral hemorrhage. He graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1889.

Charles Edwin Bowers, Wichita, aged 71, died March 23. He graduated from Rush Medical college in 1883. He had practiced surgery in Wichita for many years. He was president of the Kansas Medical Society in 1905.

Melvin Newton Gardner, Greenleaf, aged 69, died April 6 of angina pectoris. He graduated from the University of Michigan Medical School, Ann Arbor, in 1883.

George Miller, St. Marys, aged 72, died April 22. He graduated from the University of Pennsylvania School of Medicine, Philadelphia, in 1878.

Warren D. Blatchley, Fort Scott, aged 76, was found dead in the bath room, presumably of heart disease, March 26. He graduated from the Physio-Medical Institute, Cincinnati, in 1877.

Jacob Lorenzo Loutzenhiser, Windom, aged 44, died May 2 of cerebral hemorrhage, at a hospital in McPherson. He was graduated from the University Medical College, Kansas City, Mo., in 1905. He served during the World War.

Richard Clarke Baker, Kansas City, aged 65, died in May of heart disease. He graduated from the University of Iowa Homeopathic Medical College in 1890.

Moses E. McCray, New Albany, died May 7 at a hospital in Kansas City, Mo. He graduated from the American Medical College, St. Louis, in 1880.

BOOKS

Principles of Chemistry. an introductory textbook, by Joseph H. Roe, Ph. D., Professor of Chemistry, George Washington University Medical School. Published by C. V. Mosby Co., St. Louis . Price, $2.50.

This textbook was prepared for the instruction of nurses and should fulfill that purpose excellently. Since chemistry is one of the subjects a doctor very easily forgets, a book like this, by which he can readily refresh his mind on points growing clouded, would be worth while having at hand.

The Medical Clinics of North America (Issued serially, one number every other month.) Volume X, Number X, (Boston Number, March, 1927.) Octavo of 311 pages with 34 illustrations. Per Clinic year, July 1926 to May 1927. Paper, $12.00 Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

One of the articles of particular interest in this number of medical clinics is the report of Minot and Murphy on liver diet in pernicious anemia; and another one is on the effect of tonsillectomy on rheumatic fever by Robey and Freedman. Lord reports a case of spontaneous subdural hematoma and Sturgis discusses organic lesions in neurotic patients. Talbot writes about early tuberculosis of messentery lymphnodes and Weiss discusses obstructive diseases of the common bile duct. Isaacs has a paper on anemia in cancer. Sprague and White have an interesting clinic on heart block. Wearn's subject is renal function tests in diagnosing nephritis. Fremont Smith has a very interesting article on the diagnostic difficulties in general practice. Emery's article on the significance of so-called constipation is instructive. There are numerous very valuable contributions to this number of the clinics.

Should We Be Vaccinated? by Bernard J. Stern, Instructor in Sociology, Columbia University. Published by Harper & Brothers, New York.

This is a concise review of the contro versy on the efficiency and the dangers of vaccination with a short history of this method of protection against smallpox. He has plainly shown by quotations from the writings of early opponents that the criti cisms of its early history, as well as at the present time, were founded upon ignorance. It is an entertaining and instructive little book.

A Text Book of Medicine. By 130 American authors. Edited by Russell L. Cecil, M. D., Assistant Professor of Clinical Medicine, Cornell Univerity, Medical School, New York. Octavo of 1500 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $9.00, net.

It is the author's opinion that a textbook on medicine of real value to the profession

can not now be written by one man, but that by the combined work of those who, though not necessarily specialists, have largely devoted themselves to one subject, or one disease, something of real value may be produced. With this idea in mind he has secured contributions from one hundred and thirty such men. Most of them are teachers in university medical schools. Theoretically this should be as nearly the last word on the practice of medicine as it is possible to utter and should be warmly received by the profession. However, there are a few men who are keen observers and capable of interpreting extensive clinical experience who will no doubt prefer more extensive reviews of the various opinions and theories on the various subjects discussed. In other words there are some men in the profession who prefer to have all the evidence and make their own conclusions rather than to accept the ready made kind.

Management of the Sick Infant, by Langley Porter, M. D., Professor of Clinical Pediatrics, University of California Medical School, and William E. Carter, M. D., Instructor in Pediatrics, University of California Medical School. Published by C. V. Mosby Co., St. Louis. Price $8.50.

The authors have revised this work so as to incorporate the more important things that have developed since the former editions were printed. Any books on this subject must of necessity cover a very large field. The material has been well arranged for convenient and practical use. Descriptions of disease are concisely and clearly presented. Directions for management are clear and definite and are mostly based on clinical **experience.**

American Association of Medical Milk Commissions, proceedings of the nineteenth and twentieth conferences.

This is a complete report of the nineteenth annual conference held in Atlantic City in May, 1925, and the twentieth annual conference held in Dallas in April, 1926. It contains much valuamle information.

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume 7, Number 1. (Cancer Number, February, 1927.) 235 pages with 153 illustrations . Per clinic year (February 1927 to December 1927). Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

This number of the Surgical Clinics is devoted to the subject of cancer. The first article, on the origin of bone deposits in breast cancer, is contributed by Sampson Handley of London. The other contributors are all associated with the Philadelphia General Hospital. The subjects of the various articles and clinics cover the various forms of cancer with the most approved methods of treatment. There is in these articles a great deal of information concerning the use of radium, the technic to be employed and the results to be expected. This is the first of two numbers to be devoted to cancer.

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume 7, Number 2 (Cancer Number, April, 1927.) 231 pages with 113 illustrations. Per clinic year (February 1927 to December 1927). Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

This is the second number of the Surgi the contributors are nearly all associated with the Philadelphia General Hospital. These contributions also cover a considerable variety of cancers and there are several detailed descriptions of treatment. These two volumes have added something of inestimable value to the literature on this subject and it is strictly up to date.

The Fifth Avenue Hospital Clinics, New York, by the editorial board. Published by Paul B. Hoeber, Inc., New York. Price $5.00.

These clinical reports are taken from the material presented at the semi-monthly staff meetings. The articles included in this volume are instructive, they have evidently been carefully selected and they cover a considerable field in medicine.

Examination of Children by Clinical and Labaratory Methods, by Abraham Levinson, M. D., Associate in Pediatrics, Northwestern University Medical School. Second edition. Published by C. V. Mosby Co., St. Louis. Price $3.50.

There are a good many of us who do not succed in making very satisfactory physical examinations of children. To such his book will be of considerable value. The directions given are explicit and are well illustrated. The findings are well interpreted and should aid materially in reaching a correct diagnosis. There has been some new material added to this edition so that it is brought up to date.

An Outline History of Ophthalmology, by Thomas Bell Shastid, M. D., Duluth, Minn. Published by the American Optical Co., Southbridge, Mass. Price, $1.25.

In this book is reproduced an address on this subject delivered before the Minnesota Academy of Ophthalmology at it meeting in Minneapolis, 1926. The author finds a beginning for this history in certain records dated 2250 B. C. and follows its development up to the present time. It is a fascinating story and one is surprised



The Diagnostic Department of Research Hospital

23rd & Holmes Sts., Kansas City, Mo.

The Diagnostic Department of Research Hospital was established in November 1924. Patients are received for diagnosis from reputable physicians. On completion of examinations, reports, which include the patient's history, physical examination, laboratory and x-ray reports, the findings of various specialists and the final diagnosis with recommendations for treatment, are sent to the patient's physician—in no instance will reports be given to patients. The fee includes all necessary tests and examinations. The following Departments are represented:—

Medicine, Surgery, Orthopedics, Neurology, Oto-Rhino-Laryngology, Ophthalmology, Urology, Dermatology, Gynecology, Obstetrics, Radiology, Pathology, and Electrocardiography.

For further information address:

THE DIAGNOSTIC DEPARTMENT OF RESEARCH HOSPITAL
23rd and Holmes Sts., Kansas City, Mo.

Grandview Sanitarium

KANSAS CITY, KANSAS

The Grandview Sanitarium was completely destroyed by fire. Fifteen years active work in the sanitarium business enabled us to know our needs for the future. We have planned, built and completed what we believe to be an ideal place and are open and ready for business. Thanking our friends for their patronage in the past and assuring you we are prepared to give as good service as can be had in any sanitarium, we remain,

Very truly yours,

E. F. DeVILBISS, M. D.,
Superintendent.

Office 917 Rialto Bldg., Kansas City, Mo.

to learn how much was known about the eye nearly two thousand years ago.

Gynecology, a Manual, by John Osborn Polak, M. D., Professor of Obstetrics and Gynecology, Long Island College Hospital; Professor of Obtetrics, Dartmouth Medical School, etc. Third edition. Published by Lea & Febiger, Philadelphia. Price $5.00.

This work has been thoroughly revised bringing it up to date. There has been added a summary on the glands of internal secretion and their effects upon the development of the sexual organs. He has stressed the salient points in pathology, symptomatology and diagnosis and has confined the text to accepted theories, debatable questions having been omitted.

Practical Otology. By Morris Levine, M. D., Associate Professor of Otology, New York Post Graduate Medical School. Publishel by Lea & Febiger, Philadelphia. Price $5.50.

This is a very well presented treatise on the subject. The author's long experience as a teacher has enabled him to present the phases of his subjct in logical sequence. He has confined himself in great measure to conclusions drawn from his own experience and observation. In the various treatments described he is clear and concise so that the details suggested are easily understood, and these are carefully illustrated.

City Health Adminsitration. By Carl E. McCombs, M. D., Published by the Macmillan Company, New York.

The author believes that a great deal of educational effort must yet be spent in establishing proper organization and administration of government health agencies. He has devoted considerable time in surveys of local and state health administrations and in instructing teachers and students along this line. The work deals comprehensively with the particular requirements of a city health department.

Obstetrics for Nurses. By Joseph B. DeLee, M. D., Professor of Obstetrics at the Northwetern University Medical School; Obstetrician to the Chicago Lying-In Hospital and Dispensary. New (8th) Edition, Revised. 12mo of 635 pages, with 266 illustrations. Philadelphia and London: W. B. Saunders Company. 1927, Cloth, $3.00 net.

In this the eighth edition of this book the author has inserted some new subjects, among which are the iodine and mercurochrome preparation of the parturient for labor, Gwathmey's synergistic obstetric analgesia and the identification of new born babies in busy maternities. He has endeavored to confine the text to established facts and practices. He has also tried to point out some difference in details in home and hospital obstetrics.

How to Make the Periodic Health Examination, a manual of procedure, by Eugene Lyman Fisk, M. D., and J. Ramser Crawford, M. D. Published by the Macmillan Company New York.

The striking feature about this book is that the authors seem to have in mind a complete examination and have outlined the procedure for such an examination. Every physician who conscientiously believes that periodic examinations will be of benefit to the people, particularly to his own clientele, will appreciate the outlines prepared and the instructions given in this book for making a thorough and complete examination. This point of thoroughness cannot be too strongly emphasized and the authors should be commended for supplying such an excellent guide.

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In the Archives of Surgery for January is a report of some experimental work on aspiration abscess by D. T. Smith. His experiments conducted on mice, guinea pigs and rabbits consisted in the intertracheal inoculation of material scraped from the alveolar border of the teeth of patients suffering from moderately severe pyorrhoea. He states that the same morphologic types of organisms were recovered from these experimental abscesses as were found in both post operative and nonoperative pulmonary abscesses in man. His conclusions are that the greater number of pulmonary abscesses are due to aspiration of material from the teeth and tonsils, although a small number may result from infected emboli from the upper respiratory passages.

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"It says here in the paper that Dr. Brown is a pathologist. What's that mean, pa?"

"A pathologist, my boy, is a doctor who invents diseases for other doctors to cure."
—Boston Transcript.

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The Family Doctor, The Surgeon, and the Evaluation of the Referred Patient As a Risk

IVAN B. PARKER, M.D., Hill City, Kansas

Read at sixty-first annual meeting of the Kansas Medical Society, at Hutchinson, May 3, 4, 5, 1927.

Some years back it seemed as though the Family Doctor's place in the medical profession was to be supplanted by the specialist, group medicine, or the established clinic. Indeed, these three conditions went so far and so fast that their weaknesses were soon brought to the surface. It became quite evident there was a place in medicine that no specialist or any of these substitutes could fill. The pendulum has swung backward and now the family doctor is coming into his own again. Family doctors should wake up to their responsibilities and meet conditions fairly and in a scientific manner.

The surgeons and specialists were not alone to blame for the conditions as they existed in earlier days. Too many family doctors either through lack of initiative, laxity of preparation or performance, timidity or inherent carelessness, helped the movement. After a somewhat stormy and disastrous time we are quite safe in saying that the patients themselves, their relatives and friends, and in nearly all cases the surgical specialist realized the importance of the well-trained family physician. Most surgeons today are giving a respectful ear to the diagnosis and the suggestions made by the family doctor when he refers a patient. Of course there are exceptions, very good mechanical men too, who belittle and undervalue the suggestions offered by the family doctor, often to their sorrow and to the disaster of the patient.

While the family physician may be lacking in some of the finer laboratory tests, his trained observations over a long period of years, sharpened by the necessities of infrequent visits and untrained nursing, have taught him to anticipate the unseen emergencies and to properly evaluate his patient. He has something no specialist doing exclusive work can hope to arrive at unless he has served the patient as counselor for many years. Even then his opinions are apt to be warped somewhat by his specialty. No surgeon, no specialist, can properly evaluate some of the inherent qualities of the individual referred to him as well as the man who has spent years, perhaps a lifetime with the particular individual or family. The family doctor knows the frailties, the resistance, the ability to come back and to withstand punishment. It is no uncommon event for the family doctor to base his opinions of the particular individual to be operated on, from his knowledge of that individual from birth to the time of the operation. From previous experiences he has knowledge of the load the heart will probably carry, knows what to expect of the stomach, the lungs, the liver, the heart and the bowels. In fact he has made the repairs on this particular physical and mental mechanism since it first started to run. He has watched its course through school, through work and play; through the strenuous exertions of football and track, and the mental strain of the keyed up nervous tension of debate and class. He has also watched its behavior when harrassed by infections. His knowledge goes back even farther than this. He knows the particular brand of the family. And families have brands, just as clothes and machines have brands. He expects members of one family to withstand punishment and be going strong at the finish, while the individuals in another family he expects to break down long before the finals, even under similar or less severe conditions. The family doctor makes but little fuss about many of these details. His subconscious mind tells him intuitively. He evaluates the case just as he recommends an insurance risk. Many of the questions on insurance blanks he can answer just as accurately as if he made the physical and laboratory tests. The strength or weakness of each individual organ is better known to the family doctor than to any one else. There are men in this room who have had sad experiences with their referred patients for operation. I wonder how many of you have regrets, I confess I have some. In some instances the results might have been different had I in-

sisted upon stating the evaluation of the patient. Thirty years ago it was difficult for the family doctor to get much attention from the surgeon. His opinion was treated lightly or overlooked if he gave it. The surgeon seemed to feel that he was doing the operation and should be the sole judge of conditions. This was the general rule that far back. I am happy to say that this condition has changed and is changing. But few of our surgeons today are so egotistical that they can not take suggestions. They realize that the advice of the family doctor is often times a means of preventing needless deaths and his safety first signals are quite uniformly present and essential in their records. The family doctor has in his own mind evaluated the surgical risk before the patient goes to the operating room. Usually before the patient leaves his home. Along with the other things I have mentioned he has taken the blood pressure guides, which is an important protection. He has given the preoperative remedial therapy and has outlined the post-operative therapy as based upon the degree of circulatory depression which he knows the individual will probably have following the shock of the operation.

All cases going to the operating room may be classified into three classes. 1. Good Risks: Patients free from organic disease and with good resistance. These cases are not likely to prove dangerous surgical risks. 2. Fair Risks: These are patients who have an organic lesion but whose resistance is good. These cases should not be especially serious. 3. Poor Risks: These are the cases who have a serious surgical condition or an organic lesion, or both of these conditions may be so far advanced that the slightest slip in technique or treatment is likely to prove serious. The death rates of the good risks should be but 0.2 of one per cent. Of the fair risks, 7.82 per cent. Of the poor risks, 33 1-3 per cent.

So far as is ascertainable these are the latest available percentage tables and graphically point to the lesson that, if a lot of explaining about unexpected deaths is to be avoided, patients must be classified and evaluated as to their surgical risk before operation. True, there are certain known complicating factors in determining risks and these factors are usually available for evaluation. Height and weight may depart from the average. Age lies in the extremes of life. In either or both of these conditions the hazard increases proportionally. Again, the operation to be done may be slight or extensive, easy or difficult, of short or long duration, it may be safe or dangerous. It may be an exploratory or it may be an emergency operation, and the risk of course will vary accordingly. The patient other than the above condition, may be in the best of health for that particular individual, or he may have a grave pathological lesion. The prospects for successful operation and safe recovery, of course, are directly influenced by such complications, and the surgeon who uses all the resources of physiological surgery of course will save more poor risks than the one who does not. These general considerations are commonly known to the family doctor who refers the case, and the surgeon who does not make use of such knowledge is bound to have a higher mortality rate than one who does. As Benjamin Franklin so tritely said "They that will not be counciled can not be helped, if you do not hear reason she will rap your knuckles." Please do not misunderstand me. I do not wish to convey an impression that I undervalue the services of the careful, painstaking laboratory man. His information is often invaluable. Blood tests, x-rays, basal metabolic tests, tests for Moots index for operability, shock index tests, energy index tests, Grovers blood pressure key and its proper interpretation, breath holding tests, especially in the toxemias and Cornells test for disclosing incipient nephritis, vagotonia and sympathicotonia. All these have their places and quite important places, and many of them have been made not once under unfavorable conditions and nervous strain where their full value can not be correctly interpreted, but perhaps many times by the family doctor. It is true that some of these tests cannot be made by the family doctor as it requires men especially trained and with expensive instruments if they have any correct value whatsoever. Even the most staunch supporter of such grist mill procedures cannot help but have his faith shaken and his ardor cooled after several wrecks when the tests show conclusively that the cases should be thus and thus. It is absolutely impossible to make a diagnosis and prognosis upon mechanical and laboratory tests alone. It reminds me of the story the Dirty Farmer told at Rotary Meeting in Salina. He had always been quite well but he got to feeling badly and he went to his doctor who as usual was a country physician. There were many patients ahead of him and while he waited

he studied the walls of the doctor's office. He first read the diplomas and the licenses to practice. Then on one of the walls he discovered the picture of a skeleton. There were many lines leading to this skeleton and at the end of each line was a numeral and in fine print at the bottom of the chart was another numeral with description attached. Ah! Why spend good money with the Doc, why not make my own diganosis?

Which he proceeded to do. Well, the result was when he got everything summed up he had cancer of the stomach and heart disease. By this time the last patient was coming out of the consulting room and he thought it would be a dirty trick to not go in and speak to the Doc. The doctor was picking up his bag to go but set it down "Well John, what is the matter with you?" "Well Doc, I've got cancer of the stomach and heart disease." "Well, well," the doctor said, and asked a few questions and grabbed for his bags. "Well, but Doc, what are you going to do about me"? "Oh, you go home and take a good dose of salts and you will be all right." "The idea of me with cancer of the stomach and heart disease and nothing but a dose of salts; but I had known this particular Doc a long time, in fact, he was the first person I saw and I didn't want to be too hard on him so I took the salts. That was three years ago and I am not dead yet so I guess he must be right." This little story illustrates the value of that personal touch in medicine, and who in the profession has that personal touch more than the family physician? No specialist, no surgeon can hope to acquire it with the referred patient. He must rely upon the family doctor for this information. It is something hard to express in words but his intuition gives him the answer to these important queries: Can the patient stand the operation? Can he get well barring of course the known factors previously mentioned? Even with all the scientific tests, the laboratory tests and the personal touch of the family doctor, the human machine leads us to many a mistaken diagnosis and prognosis and the case apparently and almost surely safe passes over into the great beyond. As Dr. Johnson says, "No degree of knowledge attainable by man is able to set him above the want of hourly assistance."

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Dr. Sigurd Carl Sandzen, '23, has recently been appointed Instructor in Surgery at Yale University Medical School.

Some Features in Medical Legislation

J. A. MILLIGAN, M.D., Garnett, Kansas

Read at sixty-first annual meeting of the Kansas Medical Society, at Hutchinson, May 3, 4, 5, 1927.

Creation requires sentiment, necessity and agitation to prepare the minds of the people for the development of some principle or project; and this is true in legislation as it is in creation of an industry, or an organization.

The churches, secret orders and big industries use all three of these fundamentals in the development and the successful maintenance of the institutions they create.

Political parties have reached great power and prestige and placed in the statute books laws very beneficial to the State by the use of these three principles.

I have in mind a political party that came into power some years ago; following a time when Kansas was suffering from financial depression, caused by over speculation and drought with crop failure; and this party adopted one of the most sentimental political platforms that was ever given to the public, and through agitation of these questions, wrote into the Kansas statutes as laws more than half of their platform pledges, which remain in the statutes today.

From the above we can readily see the value of these three fundamentals, sentiment, necessity and agitation, in the successful development of any public question.

Legislation is always slow in development; some great questions like slavery, prohibition, enfranchisement of women, had been debated by public speakers for years, before there was sufficient united support of the people to demand of legislative bodies that these questions become a law.

Medical legislation has followed this same hesitating course that is so noticeable in other lines of legislation; one of the greatest crimes against humanity—the destruction of the life of the unborn child—had been tolerated by the people for years before legislation attempted to abolish this crime by law.

The question of public health, sanitation, quarantine and prophylaxis had this same tortuous course before either of these topics became a law; and not then until the people had been educated to the fact that the neglect of these principles of public health caused more disease than came from any other source; the indiscriminate sale of poisonous drugs to the public was not regulated until a few years ago; so the

medical profession should not become discouraged if they do not get from legislative bodies what they ask for the first time.

The medical legislation of late years has been directed more to the regulation of the various schools of medicine than to the higher standards of medical education; this form of legislation we consider a great mistake; and we believe the State does not care for the discord that may arise between the different schools of medicine, who are practicing the healing art today, as it does for well directed knowledge, efficiency and successful treatment if disease.

A few years ago there was a multiplicity of legislation to create and regulate new schools of the healing art in Kansas; so much so that one of the Governors of Kansas, Governor Hodges, appointed a committee of five citizens of Kansas, to make a study, and report the needs of medical legislation regulating the practice of the healing art in Kansos. This commission was composed of two physicians, two lawyers and one business man; and after several meetings and study of this question, the commission came to the conclusion that a standard of education and knowledge should be required of each applicant before allowing him or her to receive a license to practice the healing art in Kansas.

The commission recommended that the applicant should have a four year course in High School and that a four years course in Anatomy, Physiology, Surgery, Pathology, Gynecology, Obstetrics, Chemistry, Bacteriology Symptomatology, Diagnosis, Urinalysis, Hygiene and Sanitation, be required of each applicant for a license to practice the healing art in Kansas.

Following the report the Governor asked the commission to draw up a bill to present to the legislature embodying the idea and conclusions of the commission; and the following bill was drawn:

AN ACT to provide for the preliminary examination of all persons desiring to practice medicine, surgery, or any other form of the healing art in the State of Kansas.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF KANSAS

Section 1. The Chancellor of the State University; the President of the State Agricultural College and the President of the State Normal School, at Emporia, shall constitute a Board of Preliminary Examination to execute ond certify to the educational qualifications of all persons desiring to practice medicine, surgery or any other form of the healing art in the State of Kansas.

Section 2. The Chancellor of the State University shall be ex-officio President of the Board. The Secretary of the State Board of Administration shall be ex-officio Secretary of the said Board and keep the records of its proceedings and register the certificates issued by the said Board of Preliminary Examination. The said Board shall procure a seal for the purpose of authenticating the acts and proceedings of said Board, which seal shall be in the custody of the Secretary, and be by him used to authenticate the certificates herein provided for.

Section 3. Any person not now licensed to practice medicine, surgery, or any form of the healing art in the State of Kansas, shall, before undertaking to so practice, present himself or herself to the State Board of Preliminary Examination before seeking a license from the State Medical Board, the Board of Osteopathy, the Board of Chiropractic, or any Board established by law for the examining or licensing of such persons.

Section 4. Such person so applying shall satisfy the Board of Preliminary Examination that he or she has had a four years course in some reputable and established High School, or its equivalent, shall have spent four years of at least eight months of each year of personal attendance in some reputable college of Medicine, Surgery, or other form of healing art, which course shall include a study in Anatomy, Physiology, Pathology, Surgery, Gynecology, Obstetrics, Chemistry, Bacteriology, Symptomatology, Diagnosis, Urinalysis, Hygiene and Sanitation, and is a person of good moral character.

Section 5. Whenever the Board of Preliminary Examination shall be in doubt as to the educational qualifications of the applicant, the Board may, in its discretion, cause such applicant to be examined by a committee to be selected by the Board of Preliminary Examination for that purpose.

Section 6. The State Board of Preliminary Examination shall meet in the City of Topeka, on the second Monday in February and June in each year, and such other days as they may designate, for the purpose of conducting such examination.

Section 7. When satisfied that the applicant is qualified, as provided in this act, such board shall issue to the applicant a certificate signed by the members of the Board, the Secretary thereof and authenticated with the seal of the Board. No fee shall be charged to the applicant for this examination above provided for.

I have only quoted a part of this bill; that part of the bill which applies to the creation of the Board of Preliminary Examination leaving the salaries of the Board, and the penalties for the violation of these provisions, and also the law governing the licensing of applicants by the State Medical Board, the Board of Osteopathy, the Board of Chiropractic which is now on the statute books and had to be included as a part of this bill. I have omitted these 10 remaining Sections of the Commission bill for the reason that it would take up more space in this paper than I care to take.

This knowledge of the fundamentals of the human body and the treatment of disease, is certainly one of the leading questions for the public to consider; and one of the vital points in the care and management of contagious and infectious diseases,

of which the State has done so much to try to regulate.

He, who from lack of knowledge of the fundamentals of the human body, and disease, is unable to make a diagnosis of infectious and contagious diseases under ordinary conditions, is certainly a menace to public health, and the people of the State.

Some of the physicians who were graduated from the medical colleges 35 or 40 years ago, of which I am one; and who at that time could only receive a rudimentary knowledge of Bacteriology and some kindred subjects, remember what a task it was to gain this knowledge from the text books on these various subjects, and keep in the ranks with the younger members of the profession who had the advantage of technical training and practical demonstration in these studies.

Then why would it not be well to demand by law that every person before being given a license to practice the healing art, shall have a four years course of eight months each in these fundamental sciences.

If we, as medical men, who shuld have the greatest interest in public health and welfare of the people against the spread of disease, expect to do for the public what we are supposed to do, we will have to take these things up with the people first, instead of the legislature.

Go to the people—the legislature is only a reflex of sentiment of the wishes and demands of the people they represent in that body.

The people are always ready and willing to listen to any reasonable proposition that you have to offer to them, and if they believe the proposition a good one they are ready to help in any thing they consider beneficial to government, humanity and morality.

As an illustration of this point, a few years ago when I was a member of the legislature, we were trying to create a State Sanatorium to take care of the tuberculous people in this State. For two sessions of the legislature we had taken this proposition up with the members of the legisla ture, who would always agree with us that it was a worthy proposition and that some time the State would pass a law creating one, but they did not believe that it was now demanded by the people.

Following the expression of the members of the legislature Dr. Crumbine, who was Secretary of the State Board of Health at that time, and myself agreed to take this matter up with the people through County newspaper items, public addresses in churches and also through the women's clubs of the State.

In a very short time we had the people thinking of the necessity for this State Sanatorium, and by the time the Legislature convened again there was a demand among the people for this legislation, and when this bill came up in the Senate every member present voted for it. The bill was messaged over to the House and in about ten days time was acted on by the members of the House; ninety-two out of one hundred members present voted for this law to create a State Sanatorium in this State.

We can take these questions of health, sanitation and public welfare of the physical and mental interests of the people up in our society meetings; discuss them, and when we have approved a question by a majority vote, then let every member of the society stand as a unit for the measure; lay aside all prejudice, self interest, jealousy and indifference, in the interest of humanity.

We should come out boldly and advocate these principles and discuss them with the people; do not hesitate for fear that you will have opposition, for there has always been opposition to every question worth while. We can talk with the editor of our paper, convince him that we have a question that is in the interest of humanity, and he will write an occasional item in favor of the question; take the question up in the clubs, in the churches, and we need not fear but what these people will give us a welcome hearing; and when the public begins to advocate the question, then it will be but a short time when the Legislature will give us a favorable hearing.

In closing, I want to quote you the advice of Longfellow to a graduating class in an eastern university:

"Be bold; be bold; and everywhere be bold;
Be not too bold, yet better the excess than defect;
Better like Hector on the field to die
Than a Plumed Parisian to turn and fly."

William S. Halsted—His Life and Influence

RALPH H. MAJOR, M.D., Kansas City, Mo.

The great French naturalist, Henri Fabre, whose charming studies of insect life have made his name almost a household word in this country, in a rather pessimistic vein once wrote, "Success is for the loud talkers, the self-convinced dogmatists; everything is admitted on condition that it be noisily proclaimed."

The career and achievements of the late William Stewart Halsted, for thirty-three

years Professor of Surgery at Johns Hopkins, presents a pleasing contrast to this unpleasant picture of success painted by Fabre. No one who has ever seen, heard or talked with Halsted, could see in him any kinship with the loud talkers, or imagine him noisly proclaiming anything.

William S. Halsted was born in New York in 1852, the son of a prominent dry goods merchant. His father, as well as his grandfather, had been trustees of New York Hospital, and his uncle, Thaddeus Halsted, was a well known surgeon of New York. It is interesting to note among the scientific publications of Thaddeus Halsted an article on pulsating tumors of the thyroid gland.

Halsted prepared for college at Andover and, as Welch remarked, "was overprepared, a circumstance which does not tend to industry in the beginning of a college course." He went to college at Yale, where he was not an assiduous student," but perhaps best known as a good football player and as captain of the football team. This incident of his career, to those who remember him in after years, is of especial interest, for, as Finney remarked, "of scholarly tastes and studious habits, one would not think of him as the athlete that he had been in his earlier years."

After his graduation from Yale in 1874, he began the study of medicine at the College of Physicians and Surgeons, in New York. During this time he must have applied himself studiously, for upon his graduation, in 1877, he was awarded the first special examination prize, the highest scholastic honor at that time. After graduation he became resident physician of the medical service at the New York Hospital, and the following year went to Europe, where he spent most of his time at Vienna, Wurzburg and Leipzig. While his closest contacts were with the assistants of Billroth's clinic, more time was given to work in anatomy, embryology, histology and pathology. In Wurzburg he worked with the great anatomist, Kolliker, and at Leipzig he worked in Cohnheim's institute with Weigert.

Halsted returned from a two years' stay in Europe, a devoted disciple of the antiseptic principles inaugurated by Lister, and soon became the most talked of young surgeon in New York. His general reputation was that of a brilliant, daring and dexterous operator, but, as Welch remarks, "so repugnant were these epithets to him later and so far removed were his surgical qualities from those of mere brilliancy and boldness and speed in operating, that I feel confident his characteristic traits of thoroness, carefulness in handling of tissue, safety, refined technique and deliberateness, were his from the beginning."

Soon after his return from Europe, Halsted began his quiz classes in New York. These classes were designed for senior medical students who were competing for places in the various New York hospitals, and so successful were the candidates prepared by Halsted that his classes became famous in medical circles and he soon had more applicants than he could receive. Very soon, however, Halsted seemed to tire of this drill master method of teaching, and for the greater part of his life and particularly during the whole of his career at Johns Hopkins, gravitated more and more to the opposite pedagogical pole. His later method, as Garrison said, "was to test the swimming capacity of his pupils by throwing them into the water."

During this early period, however, Halstead was not only carrying on his quiz class, but was also fighting the battles of antiseptic surgery. The revolutionary principles of Lister at that time had few adherents in New York, and young Halsted found many bitter opponents among his colleagues at the Bellevue Hospital, where, as he remarked, "numerous antagonistic anti-Listerian surgeons dominated and predominated." Finally the wards and surgical amphitheatre became too hot for Halsted, so he improvised a tent in the hospital yard where he worked and carried out his own ideas unmolested.

About this time, Halsted made other important surgical discoveries. In 1881 he saved his sister's life during hemorrhage after labor, by a reinfusion of her own blood. This principle of reinfusion of aerated and filtered blood, previosly withdrawn in the treatment of hemorrhage and gas poisoning, was rediscovered and claimed by Johann Thiess, of Leipzig, in 1914—thirty-three years later—in ignorance of Halsted's priority. In 1881 he devised the well known "cigarette" drain for wounds, and in 1882 he performed one of the earliest successful operations for gall-stones on his own mother.

Halsted's greatest discovery of this period, however, was his work on local anesthesia. In 1885 he was using the principle of conduction or block anesthesia, by injecting cocaine into a nerve trunk or into the spinal canal. Various features were rediscovered by other surgeons in ignorance of Halsted's work—Corning (1885),

Crile (1887), Cushing (1898), Matas (1899), and Bier (1889. It was not until in April, 1922—six months before his death—that the American National Dental Association, after a careful investigation by Matas, induced Halsted to accept his priority and the award of a gold medal. Cushing, writing of this incident, says that when he, thirteen years after Halsted's work, "as Dr. Halsted's resident surgeon stumbled anew upon the principle of nerve-blocking for operations on hernia and published a paper on the subject, he was utterly unaware that his chief had ever made studies with cocaine of any sort, so reticent was he about this particular matter, and so little did questions of priority interest him."

This epoch-making discovery of block anesthesia came very near, however, being the tragedy of his life. In his enthusiasm for learning new facts, and ignorant of the dangers of the new drug, cocaine, he began experimenting upon himself, with the result that he soon wrecked his health and was forced to give up his practice and experimental work. He placed himself in the hands of his friends and through their devoted assistance, aided by an indomitable will, he slowly regained his health, and in 1887 entered Welch's laboratory at Johns Hopkins Hospital. Here he was thrown into intimate contact with a remarkable group of men, who produced a profound impression upon his mind, who fanned into a more fierce flame the sparks of his genius, and who were to be his devoted friends and many of them his colleagues for life.

Welch had just come down from New York to take charge of the pathological department and, working with him were his young assistants, Nuttall, Councilman, Simon Flexner and Walter Reed. A little later, others joined this group. Cushing and Finney became internes in the hospital. Mall started the department of anatomy, and in physiology there was a brilliant young Englishman, Newell Martin, recommended for the position by Huxley, and with him a young assistant, Howell, later to be one of the best known physiologists in the world. To this group came the genial Osler, who had recently moved to Baltimore, "that skinny, yaller Doctor Osler," who was twitting Mall about embryology and telling him that he ought to make a bell out of an embryo pig, place it on top of the anatomical building and use the umbilical cord as a bell rope to call the anatomists to worship, and remarking to Welch that the entrance requirements of the new medical school were so high that he thanked the Lord he was going to be a professor for he could never qualify as a student.

Osler, already known as "the Chief," took an immediate liking to Halsted, whom he promptly dubbed "the Professor," a title by which Halsted was known to all generations of Hopkins men. The Chief, the Professor, and Poppsy, as Welch was known, soon formed the hub, as it were, about which the new medical school presently revolved.

In Welch's laboratory Halsted began to study the compensatory hypertrophy of the thyroid gland, and his findings were, as stated by Cushing, "for twenty years the basis of our views regarding exophthalmic goitre, as an expression of functional overactivity." When the Johns Hopkins Hospital was formally opened in 1889, Halsted was appointed Surgeon-in-Chief, and in 1893, with the opening of the Medical School, Halsted zecame professor of Surgery.

In this new clinic, Halsted applied himself to the study of aseptic surgery, that is, to the perfect and uneventful healing of wounds after operation. Seeing the splendid results following the boiling of instruments and surgical dressings, Halsted reasoned that in ideal asepsis the surgeon hould have a "boiled hand." He began experimenting first by dipping his hands in a solution of collodion, which, after drying, formed a thin coat over his hands and gave him the "boiled hand" he wished. This protective covering, however, soon cracked or peeled off during the process of an operation, so Halsted hit upon the idea of using rubber gloves, and achieved his ideal of operating with sterile instruments, sterile dressings and sterile hands. The procedure of using rubber gloves is now ,of course, well nigh universal. It would be interesting to know how many surgeons who habitually don rubber gloves every day are aware of the fact that this important item of surgical technique they owe to Halsted.

Halsted soon become widely known as an inventor of novel surgical procedures, based in *every* case upon animal experimentation in the Hunterian laboratory of the hospital—please note, all anti-vivisectionists. In 1889 he devised the modern operation for hernia, but as Bassini had antedated him by a few months, he cheerfully gave way in favor of the Italian operation. His operation for cancer of the breast (1889), as Matas observed, "set a

new pace in the progress of breast surgery, which had no precedent in the history of this malignant disease."

In 1898 Halsted performed the first successful operation for a primary carcinoma of the ampulla of Vater, and in 1892 the first ligation of the subclavian in its first division. To discuss his later surgical achievements in detail would carry me far beyond the time alloted for this paper. As Matas said in his memorial address, "in every advance that has marked the progress of surgery in the last thirty years, we find the impress of his hand and the reflex of his brain."

Halsted was of English extraction and, as Garrison said, "had something of the facial mask of a retired Anglo-Indian colonel of ironic eye, sun-baked cheek bones, well-hung chin and well groomed mustache." He was an aristocrat in his breeding ,for if there was anything he detested, it was vulgarity, coarseness and undue familiarity. If unduly provoked, he could, on rare occasions, swear like a gentleman and with dignity, but in his ordinary conversations, lectures and clinics, he always had at his command enough adjectives and adverbs, without resorting to profanity.

Few great men are so modest, so self-repressed, or so adverse to the limelight of publicity. His references to his own work were always very casual and most impersonal; he let his own work speak for itself.

Halsted treated his students with the greatest respect and consideration, but rarely, if ever, with familiarity. In the final examination, which was an oral affair with one student at a time, Halsted treated the agitated Senior, not as a poor dumb student, but as a colleague whom he had called into consultation. He listened with great interest to their answers and, if the examined student began to give answers that were very remote from the correct ones, Halsted would look puzzled and murmur, "perhaps so, perhaps so, but that has not been my experience. Still, medicine is so full of improbable things that almost anything is possible," all said with gentleness and not the faintest trace of sarcasm.

As a teacher of surgery, Halsted never quite attracted students like the brilliant, snappy Cushing or the genial Finney. To borrow a musical simile, Halsted was a sort of surgical Johann Sebastian Bach, who was appreciated, acknowledged as a great master, but never thoroughly enjoyed by the amateur who derived more pleasure from Schubert or Gounod. We students used to say that Halsted's surgical rounds began as a dialogue between the Professor and his Resident and then, getting over the Resident's head, was continued as a monologue. This was, of course, due to our deficiencies, for we understood only the arithmetic of surgery, and the Professor was talking calculus to us. All his internes, residents and associates were devoted to him and their admiration, love and loyalty was unbounded. That he was a great teacher of surgery to the prepared mind, is shown by the high rank attained by so many of his pupils—I need only mention Finney, Cushing, Bloodgood, Hugh Young, Reid, Goetsch and Dandy.

As stated earlier in this paper, Halsted received from the National Dental Association, in April 1922, a gold medal in honor of his discovery of neuroregional anesthesia, thirty-seven years before. Halsted was much touched by this spontaneous and generous, though belated tribute. He wrote to Matas, "The celebration was a success. I am so thankful to have lived to take part in it. Not a wink of sleep did I get during the night of Saturday. I was too exhilarated for repose. Once before in my life, I was kept awake by a great happiness; this was the night that I passed successfully the examination for Bellevue Hospital in 1876."

Six months later, Halsted was dead. At a memorial service in his honor, held at the University on December 16, 1923, President Goodnow, Matas, Finney and Welch spoke of his ideals and achievements. In closing, Welch said, "The influence and tradition of William Stewart Halsted as teacher, investigator and surgeon will re- priceless possession of American medicine Hopkins University and Hospital and an inspiration to his successors and to future generations of surgeons." May I add that Halsted, like Osler, who preceded him by one year into the great beyond, is now the priceless possession of American medicine and an inspiration to his successors in this and in every part of our country.

Practical Suggestions in the Use of Antisyphilitic Remedies

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Abstract of an address delivered before the School for Health Officers and Nurses on April 12 1927.

Regardless of the title of this screed, I realize fully that there is little chance of being 100 per cent practical in dealing with the subject of anti-syphilitic remedies. There are so many semi-proven theories,

and such a wealth of scientific experimental work done and being done, that the thing that seems to be a clinical fact, often runs counter to the theory. If you read the writings of Myers, Fordyce, Thorne, and many, many others, you cannot help being impressed by their great knowledge of the action of the arsphanamines gained by painstaking experimental study of these remedies in actual clinical use.

In the matter of the nitritoid crisis, which is the most frequent immediate reaction, and the one which turns our hair gray, Myer's elaborate article is convincing. Here he proves that with every dose of arsphenamine, there is a migration of the white blood cells from the periphery to the splanchnic area of the body in direct proportion to the severity of the reaction. The question, then,—what causes this dilation of the splanchnic vessels? Is it the remedy itself, the injury to the autonomic nervous system from the disease, or is it some toxic agent in the solution? Clinically, the latter seems the most likely from the indisputable fact, that the more perfect the technic, the less frequent the reaction. The stumbling block in the path of this line of reasoning is the fact that we frequently mix a quantity of arsphenamine sufficient for fifty patients. Perhaps, two of the fifty patients receiving this medicine will develop reactions while the rest feel no discomfort. This would strengthen the belief that a few individuals are at least temporarily sensitive to the drug, and the reaction is in the nature of an anaphylaxis. The treatment of the nitritoid reaction is: Adrenalin solution hypodermically in ½ c. c. doses, repeated every five minutes. I have never found it necessary to give more than three doses in succession. In our clinic all varieties of reactions are progressively lessening. We actually run along for months without encountering a reaction of sufficient severity to require treatment. This convinces me that careful technic observed in every process of the preparation and administration of the arsphenamines will reduce reactions to a minimum. I attribute this improvement in our clinic to our having finally learned to follow **to the letter** the printed instructions furnished by the manufacturer. I am convinced that no one has a license to disregard these instructions in any particular. The very best advice anyone could give is to prepare the solution strictly according to the manufacturer's formula, but this is sometimes difficult. For instance, they all instruct us to use freshly distilled water as a solvent, and normal salt solution as a dilutant. This at first might seem an easy direction to follow, but I have come to believe that chemically pure water is the scarcest commodity on the face of the earth. I dare say, there is not a pint of pure water in the entire state of Kansas. I made a rather careful investigation of water stills, and I found that even the manufacturers do not claim their stills will produce pure water. The little glass flask and coil still is the best on the market, but droplets of impure water will occasionally bubble over in this still in spite of your very best efforts. Dr. Duke of Kansas City has devised a modification of this still which looks like a classic, but its capacity is so limited that it would not serve a large clinic. At our institution we use a metal still with long copper coil, then we redistill. This gives us a fairly pure product, but it is by no means perfect. I firmly believe that by far the most common cause of the nitritoid reaction with its distressing chain of angioneurotic symptoms, is caused by bacteria laden water. In theory old water is as good as any, if it has not been contaminated, but who can say that it has not? Therefore, always use freshly distilled water. Sterilizing imperfectly distilled water does no good so far as reactions are concerned. Use the water cool.

Next in importance, is to allow the solution to stand for 15 or 20 minutes, then filter through a washed sterile paper or gauze filter. This is a necessity, for it requires this time for the remedy to change from a colloid to a crystaloid substance. The solution should be administered slowly. However, if your water is good, and your solution properly prepared, and sufficiently diluted with normal salt solution, the rapidity of administration is not so important. It will not flow too rapidly through a 19 or 20 gauge needle by the gravity method. Occasionally the solution irritates the vein, due in most instances to over-alkalization from the distilled water becoming charged with carbondioxide. Prolonged shaking of the mixture in the presence of air overcharged with CO_2, or using water that has been stored in a room where an open flame has charged the air with the gas, will affect the solution in this way. This is in the nature of a chemical phlebitis, and ranges in severity from varying degrees of pain extending up the arm to a venous-thrombosis followed by cording of the vein. Careful technic will eliminate this reaction.

It is not apt to occur if the needle is introduced in a large vein. So it is always wise to select the largest available vein.

The Herxheimer reaction is the one reaction not influenced by technic. This rare immediate reaction is said to be due to the liberation of endotoxins from the killed organisms. It is marked by a sudden exaggeration of the clinical symptoms, mainly secondaries. It is said that it is the Herxheimer phenomena that makes the use of arsphenamine in syphlitic encephalitis and optic-nerve involvement dangerous. I have not seen disastrous results following the use of arsphenamine in neurosyphilis, but I approach these conditions with some apprehension, for I can see how a sudden exacerbation of lesions in these vital organs could cause serious trouble. This reaction is also anaphylactoid in character, and the treatment is adrenalin solution as in the nitritoid crisis.

Arsenic dermatitis is the most distressing of the late reactions. This, in its worst form, is a very serious accident, as the mortality is high. It is caused by the arsenic becoming localized in the skin, due mainly to rapid administration of concentrated solutions. Jaundice has the same etiology, the localization taking place in the liver. Death occurs in exfoliative dermatitis from infection of the skin lesions, so it is important to recognize it early and begin treatment before the skin lesions are extensive. Here again the answer is, care in the preparation of the solution. The use of normal salt to dilute the arsphenamine solution will practically insure against this type of reaction. The treatment is freshly prepared thiosulphite solution. This should be administered intravenously, supplemented by enteric coated pills by the mouth, and in solution as a topical application to the affected skin. If this remedy is freshly prepared from chemically pure crystals and given early, its action is really marvelous. The made-up solutions are said to be almost inert.

The air bubble that used to alarm us is of little consequence up to 5 ccs. I have never seen air bubbles cause symptoms, but no one would deliberately allow air to pass into a vein. It is safe to say, however, that we all do in intravenous medication. Another striking thing is the rarity of infection at the point of injection. We dash a little alcohol over the arm, a procedure of doubtful benefit, but in at least 150,000 punctures of this sort, I have never seen an infection of consequence.

Skill in hitting the vein is like skill acquired in hitting a golf ball. You learn to do it or you never do, according to your capacity. I have just one stunt worth passing on, and that is immersing the arm in hot water for three minutes before applying the tourniquet. This will produce veins in 99 per cent of the difficult cases.

The common accident in intravenous medication, is forcing the needle through both sides of the vein. There is no crime in failing to enter a vein, but to allow a considerable quantity of the arsphenamine solution to flow into the tissue of your patient's arm is a crime. If you watch the point of the needle carefully for the slightest puffing, or if the patient is in pain, you should stop the injection and investigate. However, if this accident does occur, as grave as it first appears, you can assure your patient that he will completely recover in two or three months. Hot applications locally and opiates internally are gratifying to the suffering patient—a comfort that is due even the person in need of arsphenamine. In this connection, I want to implore you not to despise these patients—they are not always to blame for their condition; they are easily rendered harmless, and they are frequently otherwise good citizens. Then, too, no one is immune, and the treponema is no respecter of persons.

Treating syphilitic infants and small children is a worthwhile endeavor. I believe the Fordyce method is the most practical, for the veins of infants are wellnigh impossible. and the difficulty encountered in controlling a child during adminstration. even if the veins are available, is too great to be worth the effort. Using a Fordyce needle. the remedy is introduced into the muscle in the same manner as mercury. We figure the dosage on the basis of body weight. We dissolve a .4 neoarsphenamine ampule in 16 minims of water then give one minim for each 7½ pounds body weight, repeating at intervals of two weeks. This treatment is effective both clinically and serologically. The child occasionally vomits, and seems somewhat disturbed for a few hours after treatment, but I have never seen serious general symptoms, and local lesions are suprisingly trivial.

Passing from the arsphenamines to mercury, we take up a remedy far less positive in its action, but one, I am sure, of very great importance in the treatment of syphilis. After trying soluble and insoluble mercuries, I have finally adopted bichloride in

the very convenient form of 1 grain bichlorodol collapsules, Metz. Here again, we follow the manufacturer's instructions for preparation. To determine the point of injection, we divide the buttock into four imaginary quadrants, and plunge a two-inch twenty-gauge needle into the inner corner, of the upper outer quadrant, according to Stokes' method. We then massage the point of injection a minute or two. Contrary to the usual custom, I am going to admit that we get some soreness following this treatment. In the young healthy patient the soreness is insignificant indeed, but the older patient whose anatomy is laden with bacteria from focal infections, soreness is the rule, but abscess formation is so rare that it need not be taken into consideration. There is only one accident that troubles us in administering this remedy. About every 10,000 injections the nurse breaks a needle, and it is a part of my official duties to recover the lost property. From necessity, I believe I have grown proficient. In fact, I fear I have developed a Narcissus complex regarding my ability to find the lost needle. Using novocain for anesthesia, I make an incision one and one-half inches long through the skin in the most likely spot. I carry this incision down through the billowy adipose tissue to the muscle. Then I take a pair of sharp scissors, and begin to cut out from either side of the incision through the fat. Sooner or later I feel the needle between the blades of my scissors.

At the men's prison we use Mercurosal, (Parke-Davis) intravenously for economic reasons. This, in my humble judgment, is a very good preparation of mercury. It is easy to administer, and symptoms of mercurial poisonings are not troublesome. The diarrhoea and cramping occasionally encountered is relieved by a full dose of paregoric. I use Bismuth and Tryparsimide to broaden my armamentarium, but I have not been greatly impressed by the results. If you are striving for a negative Wassermann, and of course you are, it is well to change remedies as there may be something in the theory of the organisms becoming tolerant to one drug, and switching to another might be beneficial. Personally, I am more troubled by patients whom I believe have syphilis, but who return a negative Wassermann, than I am by the Wassermann fast case whose demonstrable lesions are closed.

The curability of syphilis is hard to prove, but relief from symptoms is the most positive thing I know of in medicine. You can take the most loathsome mass of putrifying sores that ever housed the soul of man, and you can say "I can heal you and I don't mean maybe." I have had quite a broad experience with this disease in my institutional work, and I can truthfully say that I have never had these remedies fail to close open syphilitic lesions. The hidden lesions require more imagination than I possess. There is so much scarring in the healing process that it is hard for me to determine whether I am dealing with an active lesion or a scar damage. Regardless of this, the use of antisyphilitic remedies cannot help being gratifying to both patient and physician, and if we are careful to prepare and administer them according to the prescribed methods, they are not likely to fail to give us pleasing results.

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Post-Operative Thrombophlebitis With Pulmonary Complications

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Before taking up the subject of thrombophlebitis it is perhaps best that we review briefly the formation of the thrombus and the condition characterized by its presence.

Thrombosis may occure in any part of the circulatory system. Arterial, venous, capillary and cardiac thrombi should be distinguished therefore. It is so commonly an affection of veins that textbooks treating on the general subject pay very little attention to its occurence elsewhere in the circulatory system. Venous thrombosis may result from local causes, such as trauma, compression, phlebitis, phlebo-sclerosis, inflammation, varicosities, lesions of surrounding parts or venous connections with septic or gangrenous foci. The formed elements which may enter into its composition are blood platelets, leucocytes and red blood corpuscles.

More than sixty years ago Virchow called attention to thrombosis, but he did not distinguish it from coagulation. By a thrombus is meant the formation in a vessel of a solid mass or plug from the constituents of blood, occurring during life. Coagulation is probably in no way responsible for thrombosis, but on account of the close similarity and its confusion by many writers it is perhaps best that we mention the substances necessary for coagulation. In the blood are found fribrinogen, fibrin-ferment (thrombin) and calcium salts. Fi-

brinogen and calcium salts are normally present. Thrombin is not present as such in the blood, otherwise coagulation would take place. It is supposed that it first appears in an inactive form as pro-thrombin or thrombogen. Much discussion has arisen as to the means by which it is converted into thrombin. On the analogy of Pawlow's hypothesis of the production of trypsin from trypsinogen by the action of enterokinase, Morawitz and Fuld independently put forward a similar explanation to account for the activation of prothrombin, namely that a zymoplastic substance, (thrombokinase) or coagulin, in the presence of calcium salts transforms prothrombin into thrombin and as a result the fibrinogen is coagulated. As to the origin of thrombokinase and prothrombin there is some uncertainty; prothrombin is either secreted by the blood platelets or leucocytes or it results from their destruction. Thrombokinase is derived from the blood platelets, the leucocytes, the vessel wall, or from tissues generally.

The modern theory of thrombosis is that the blood platelets play a prominent part, and but little or no part in coagulation, while on the other hand fibrin, although active in coagulation, plays only a minor part in the formation of a thrombus. Blood platelets are normal constituents of the blood and number from 180,000 to 780,000 per cu. m. m. They may collect about a foreign body, in consequence of a slowing of the blood stream; upon the damaged wall of a vessel and to each other. This takes place only in the circulating blood. Following this there is a rapid accumulation of leucocytes, mostly polymorphonuclears, red-blood cells and fibrin. There are still those who adhere to the coagulation theory of Virchow. It has, however, been definitely proven that in those diseases in which blood platelets are increased thrombosis is fairly common. That chemical changes may influence the formation of thrombi has also been definitely proven. It was shown by Sahli and Egnet that thrombi did not form after the blood had been rendered non-coaguable by the injection of leeches extract, while on the other hand, Schimnelbusch was able to cause the formation of experimental thrombi after the destruction of the coagulation by the injection of peptone. So after all, each thory has its many supporters.

Th predisposing causes, as slowing of the blood stream from poor circulation, etc., localized injuries to the vessel walls, local causes from external pressure (as pregnancy, neoplasms, etc), are very important in the causation of thrombosis.

In preparing this paper and reviewing the literature, I find that Hampton and Wharton, reporting in the Johns Hopkins Bulletin have made a very careful and exhaustive study of this subject and I take the liberty to quote freely from their article.

Following the classification of previous observers, and, as before stated in this paper, they group the factors concerned in the production of thrombosis under two general heads, namely primary and contributory. Under primary they placed infection and trauma, and under contributory, slowing of the blood stream, chemical and physical changes in the blood, and the anatomical relations of the blood vessels. There is practically always more than one single etiological factor to be considered, however.

Quoting further from their article, it is practically agreed by the majority of investigators that the thrombus is first represented by a collection of blood platelets, in a few minutes leucocytes and fibrin are added to the picture. It may be described as leococytic or fibrinous, depending upon which of these two elements predominate.

The majority of observers are fairly certain of this much, but as to what induces the endothelial injury that causes the collection of platelets and leucocytes, there is still some doubt. It may be the presence of traumatism, toxins, or actual bacterial invasion. Whether each and every case of thrombosis is, or is not, infectious, is a question to be worked out. We often see cases, who present the appearance of being in good physical condition, and as far as our means of examination permits, we consider them excellent surgical risks, and yet after an apparent clean laparotomy they develop a thrombosis of the leg veins. Then there must be some justification in supposing that the operation has furnished the necessary conditions for thrombosis. Traumatism then of course must be conducive to thrombosis and it is to be supposed that there is no such thing as an operation without the introduction of organisms.

Hampton and Wharton, in strengthening the claim that operative procedures produce it, report 69 cases developing thrombosis following myomectomies, of these 69 cases they state that 17 per cent were anemis, 24 per cent were suffering from infections in the fallopian tubes and a large number had pelvic congestion of some nature. These, they state, are conditions sup-

posed to favor thrombus formation, yet only one patient out of the 69 had developed thrombosis prior to operative procedures. This they deduce, seems to indicate that operation furnished the condition necessary to the thrombus formation.

To support their idea of trauma and infection playing the leading part in thrombosis, they cite cases of uterine myomas, apparently clean, in which a hysterectomy is performed. They claim that in all hysterectomies a certain amount of trauma is done, especially if the myoma is connected with the broad ligament. When the tumor is enucleated it leaves a certain area of raw traumatized tissue. The vaginal vault is moreover richly supplied with blood vessels and venous plexuses, which in multiparas are often tortuous and varicose. In pan-hysterectomies these vessels are ligated and traumatized and involve the possibility of subsequent thrombosis. In these cases the cervical canal or vaginal vault is always opened and the tubes harbor old chronic inflammatory processes. It is reasonable therefore to believe, or at least assume, that this is a source of infection. This with the presence of traumatized tissue makes a fertile field for the development of thrombosis. In most of these cases the left lower extremity is involved and is explained by the anatomical difference in the return circulation. (The right common iliac artery crosses the left common iliac vein and causes a slight obstruction. An overloaded colon also tends to obstruct the vein). Burnham in 98 cases developing thrombophlebitis, found that 81 began in the left leg.

Clarke, reporting in the University of Pennsylvania Bulletin, in a series of 3,000 operations found 35 cases of thrombophlebitis. Hampton and Wharton reported 205 cases in 21,000 operations. Burnham (Annals of Surgery) cited 11,655 operations with 94 cases of phlebitis occurring. Klein of Vienna reported 70 cases following 5851 operations. Other operators reported about the same percentage or frequency. In all reports operations for myomata of the uterus constituted by far the largest single group. Next in importance came the group of pelvic inflammatory conditions.

The clinical picture of thrombosis is well known, and the symptoms and signs are usually unmistakable. We will therefore touch briefly upon this part of the paper. Pain is almost always the first symptom complained of in these cases. Swelling follows promptly as a rule and is usually extensive. It is always limited to the area supplied by the vein thrombosed. The temperature does not rise decidedly until the pain has become evident, although Hampton and Wharton called particular attention to and laid great stress upon the slight elevation of temperature before the manifestations of thrombosis. In the usual post-operative convalescense in a clean case the temperature should reach normal and remain there by the end of the first week or certainly during the second week. In their cases the patients showed without exception a definite, low, persisting temperature until the onset of the pain and swelling of the leg. Other observers called attention to the same thing. Most of the cases of thrombosis occur during the second and third weeks of convalescence, the most common period being the end of the second week. The pain in these cases is the first symptom to disappear and the swelling the last, often persisting for months after their discharge from the hospital.

The most serious complications of thrombophlebitis are pulmonary. In the series of 205 cases reported by Hampton and Wharton, fourteen patients (7 per cent) developed pulmonary infarcts and three patients (1.5 per cent) developed pulmonary embolism. There were two deaths in this series, one dying of lung abscesses that developed in pulmonary infarcts, and another of pulmonary embolism. Autopsies confirmed the diagnoses of thrombosis, infarction, lung abscesses and embolism in these cases. As far as life is concerned post-operative thrombophlebitis of the veins of the legs does not seem to be as serious as that of the pelvic vessels. Wilson,, Mayo Clinic, reporting in the Annals of Surgery, showed that 47 cases in 63,573 major operations ended fatally, either from pulmonary infarction or embolism. The embolus was pulmonary in 36 cases, nineteen occurring in the first post-operative week, twenty-one in the second post-operative week, four in the third week, one in the fourth week and one in the fifth week, with one as long as the ninth week. One hospital alone had eighteen deaths in a single year from this cause.

These fatalities are classified by Lochart and Mummary as follows. Those cases in which the patient died instantly. Second, those in which death occurred in a few minutes or hours with symptoms of dyspnea or pain in the chest. Third those cases in which the patient developed signs of consolidation of part of a lung and recov-

ered. Hampton and Wharton distinguish between infarction and embolism. By infarction they mean the pathological and clinical picture following the dislodging of a thrombus, not large enough to occlude the blood supply of an entire lobe, but enough to occlude the artery supplying part of the lobe. By embolism they mean the occlusion of the main artery or its principal branches. Adhering to this division or classification they present the records of 51 patients who had pulmonary infarction, embolism or both conditions. Of these 51 cases, 34 were instances of pulmonary infarction and 21 of pulmonary embolism. Of the 34 cases of infarction five died; of the 21 cases of embolism 19 died.

Infarction occurs most often in the right lower lobe. The infarct is cone-shaped with the base out, producing a raised surface upon the visceral pleura, the apex of the cone pointing toward the hilum of the lung. The pleura soon becomes covered by a fibrinous deposit which gives the friction cound heard so often and which leads many times to an erronous diagnosis of pleurisy. On section the infarct is solid, purplish-red in color and usually presents a friable surface. Microscopically the alveolar spaces are filled with red-blood cells and a few leucocytes and are quite airless.

The symptoms complained of are striking. Pain on breathing is the outstanding feature. It is usually the chief complaint, always being sudden in onset and usually severe. It is localized as a rule along the costal margins, in the axilla, or below the scapula. Cough is a minor symptom. Shortness of breath is common. Hemoptysis is sometimes present. Of physical signs the presence of a friction rub is the most common. Rales, impairment of the percussion note and changes in breath sounds are heard in a large percentage of cases. Infarction should be differentiated from pleurisy, pneumonia, pulmonary tuberculosis, bronchitis, empyema, gangrene of the lung, pulmonary and subdiaphragmatic abscess.

This should not be difficult when we realize that in the beginning we have a post-operative patient who is convalescing from an abdominal operation. In the second or third post-operative week, the patient has a sudden rise in temperature, complaining of an acute, sharp, sticking pain over the ribs, which may be accompanied by a chill. The physical signs appear about the second day, with a pleuritic friction rub as the predominant sign. The leucocyte count varies between 12,000 and 18,000. Keeping these symptoms and signs well in mind we should not be led to an erroneous diagnosis.

Pulmonary embolism may follow any type of operation, but it is usually associated with abdominal operations. Pulmonary embolism may occur any time following operation and is more likely to occur earlier than either thrombophlebitis or infarction. The relation between thrombophlebitis and pulmonary embolism is not as common as between thrombophlebitis and infarction. It seems to be an almost established fact that embolism does not occur in patients who have pain and swelling of the leg. Out of the 205 cases of thrombophlebitis reported by Hampton and Wharton, only three cases of embolism cent of cases of pulmonary embolism were were recognized. On the other hand there were 14 cases of infarction. In only 10 per pain and swelling of the legs present, while both were present in approximately 50 per cent of the cases of infarction.

From a viewpoint of pathology there is very little similarity in the appearance of the lung due to embolism and infarction. The lungs of a patient dead from pulmonary embolism show little more than edema and congestion. If the patient should live a few hours after the embolism a few patches similar to broncho-pneumonia may be found in addition to the edema. The diagnosis of pulmonary embolism is usually not difficult. This is especially true in the cases that die very early. Those cases in which death is deferred for a few hours may be confused at times with cerebral embolism, intra-abdominal hemorrhage, post operative shock, etc. The sudden partial or total occlusion of the pulmonary artery here immediately eliminates oxidation of the blood and causes dilatation of the right heart and enlargement of the superior and inferior venae cavae. Such a complete vascular disturbance as this causes shock, asphyxiation of the tissues, etc., immediately.

The treatment of thrombophlebitis is simple, chiefly because there is so little to do. It consists mainly of rest in bed, elevation of the part and the application of cold during the acute stage. Heat should be applied after the acute stage has subsided. Sedatives and sometimes codeine are indicated for the pain. As a prophylaxis against pulmonary embolism a post-operative pain in the leg should never be massaged.

Before concluding this paper I would like to report two or three cases, one of

which was of particular interest to us and at the same time somewhat atypical.

A simple appendix operation was performed upon this patient. A few hours after the operation the patient had a distinct chill and the temperature immediately ascended to 104°. At this time he complained of some pain in the right leg. Two days afterward the patient complained of a severe pain along the diaphragm anteriorly, with some difficulty in breathing. The temperature at this time was 103.8°, pulse 108, respiration 30. He appeared very restless. On examination shortly afterwards there were diminished breath sounds over the lower right lobe, with some dullness on percussion. The pulmonic second sound was accentuated. A few hours later the respiration was 40 and the patient complained a great deal about the pain on the lower right side He expectorated a great deal of mucus tinged with bright blood. On examination many moist rales could be heard. Two days afterwards the temperature dropped to 100° and remained between 99 and 100° for about 3 days, on the fourth day dropping to normal.

The patient was discharged 12 days after the operation, at this time the lung was apparently clear. Two days after his discharge from the hospital he returned, complaining of pain and swelling in his right limb. Examination showed marked tenderness in the inguinal region and down the thigh with very little swelling. Two days later the patient was examined at home and there was some swelling over the lower right leg and ankle.

A note by Dr. Thomas at this time stated: When patient had a chill and pain in the right limb immediately following operation, it was undoubtedly due to the formation of a thrombus. Immediate elevation of the part with the application of cold probably eliminated the swelling at this time. The second rise of temperature with the lung findings and course of pathology in the lung indicate most strongly a pulmonary embolus, together with the later discovered phlebitis it is almost certain.

I report this case because it is interesting for several reasons: First, the operation was clean and there was no infection; second, the early manifestations of a thrombus formation, if it was a thrombus formation; third, the formation of a pulmonary embolism following a phlebitis of the leg.

The clinical picture is typical of pulmonary infarction with one exception. It occurred on the third day of convalescence. This is somewhat early, as most cases occur during the second or third week. The lung findings and the hemoptysis along with the signs of early phlebitis are strongly in favor of infarction. The onset was not severe, there was no marked cyanosis or signs of collapse, which are usually present with an embolus. The early occurrence however, speaks rather in favor of post-operative pulmonary embolism with recovery.

Another case of interest was one of multiple infarctions with recovery. I will report this as briefly as possible.

The patient was operated July 31st, 1921, for cavernous hemangioma of the scrotal and perineal regions.

He had extreme varicosities of the extremities and without doubt the pelvic vessels.

The vessels were ligated under novocaine anesthesia. There was considerable hemorrhage at the time of the operation.

August 2nd the patient had a severe coughing spell. He complained of no pain in the chest however and examination revealed nothing. August 4th another severe coughing spell. Examination showed diminished breath sounds over the entire left side. The temperature ascended to 104.6°, pulse from 84 to 144, respiration from 26 to 58 and 60.

He expectorated a rusty colored sputum, and complained of marked difficult breathing. On August 12th he complained of being chilly and of difficult breathing. The temperature again rose to 104°, pulse 146 and respiration 40. Examination the following day showed dullness on percussion over the lower left lobe with some tubular breathing. The temperature between the sixth and twelfth had varied between 99 and 100°. Examination on August 20th showed lung findings clearing up. On the 24th the temperature ascended for the third time to 104°, pulse to 146 and respiration to 40. He complained again of pain in the chest. Chest findings again showed some diminished breath sounds with impaired resonance over the left lobe.

Following this the temperature remained between 99 and 100.5° for several days, reaching normal about ten days afterwards. The patient had apparently many small infarctions of the lung. There were perhaps no large embolic masses.

I would like to cite one other case reported in the literature mainly to illustrate the necessity and importance of diagnosing pulmonary infarction.

May 18th, or seven days after operation for a myoma the patient complained of sharp pains in the left chest. Temperature 101°. Friction rub over eighth rib anteriorly. No other positive signs. May 19th, the temperature was 104°. Still pain in left chest. Dry cough. May 22nd, temperature 101°, pulse 100. Patient seems better. Friction rub still present. May 24th. Pulse 80, temperature 98.5°. No physical signs. May 29. Has been improving until this morning, when she was taken with a fainting spell while sitting upon the bed-pan. Her pulse was weak and rapid, rate 120. After recovery from fainting she complained of heavy sensation over the sternum. Chest examination negative. Pulse 120, feeble, and at times almost imperceptible. Although the symptoms of hemorrhage were marked, it was still felt that there might be some complications in the chest, but another examination by the medical chief showed nothing. Preparations were at once made for an exploratory laparotomy. The possibility of a pulmonary embolus was suggested. The symptoms were: Dyspnea, rapid, feeble pulse, rate 140, cold and clammy extremities, irregular heart, dark spots in front of eyes, ringing in ears and heavy aching pains over the sternum. The patient was taken to the operating room, anesthetized, and the abdomen opened. When the peritoneal wound was opened there was no trace of hemorrhage. Everything was in perfect condition.

May 31st. Patient complained of pain along the femoral vein of the left leg. There was marked tenderness.

June 9th. Right leg also swollen and edematous below the knee.

June 29th. Patient was discharged. Temperature at this time 99°.

This case illustrates well the necessity of diagnosing pulmonary infarction. She had been submitted to the operation most frequently associated with phlebitis, infarction and embolism—hysterectomy. After her post-operative rise had subsided, she ran a daily temperature of 100°. On the eighth day she had her first infarction, the temperature reaching 103° on the following day. After she had recovered from this so called "dry pleurisy" she was allowed to get out of bed. On the 11th day following the first attack, after the temperature had become normal and the symptoms disappeared, she had a second and larger embolus that almost proved fatal.

It is rather remarkable that this patient survived an infarction, an embolism and two laparotomies, all in less than three weeks, the second laparotomy being performed during the acute collapse following the embolism. The association of infarction, embolism and phlebitis in one case is rather unusual. In closing the authors state that they make no apology for presenting the details of this case; she being seen by the chiefs of two departments.

CONCLUSION

1. That infection and trauma seem to play the most important part in thrombophlebitis.
2. That practically all cases show a slight rise in the temperature curve before the onset of pain and swelling.
3. That phlebitis and thrombosis of the leg veins when associated with pain and swelling are rarely followed by fatal embolism.
4. That post-operative pulmonary complications are not often diagnosed, being confused with pneumonia and pleurisy.

The Relative Frequency of Disease Conditions

ALBERT S. WELCH, M.D., Kansas City, Mo.

Read before the Marion County Medical Society, June 15, 1927.

In the large cities, most of the private patients who die are not subjected to post-mortem examination, and in the small towns even fewer autopsies are held. Clinical diagnoses are made from the knowledge of the attending physician, based upon his individual experiences. The average doctor secures most of his knowledge from cases which he himself handles, and from current medical literature which particularly appeals to him. This permits a very biased knowledge, because clinical diagnoses are notoriously faulty when not checked by autopsy; every individual physician has his likes and dislikes which make him necessarily tend toward specialism; and current medical literature represents the things scientists know most to talk about and not medical situations as they actually exist. Witness in the medical indices of the world hundreds of articles on the technique of tonsillectomy, but only a few dealing with the largely unknown functions and pathology of the tonsils.

In medical school, students are forced to study subjects that are necessary to their education but distasteful to them. This is not so after graduation. The young doc-

tor especially interested in dermal lesions, when allowed to choose for himself, frequently sees only the skin to the partial exclusion of other parts of the body. The gastroenterologist occupies himself with stools and stomach contents. The specialist on diabetes has been known to let his patient die with an unrecognized heart lesion while engrossed in keeping her blood and urine "sugar-free." The research man has neglected the comfort of his patient for experimental purposes.

A postmorten room is not an agreeable place; to solicit an autopsy permit is distasteful; and the subject of pathology is generally considered dry, hard and noninteresting. It is undoubtedly for such reasons that not only hospital staff men, but internes from grade A medical schools as well are conspicuously inactive in regard to autopsies.

Statistics compiled by the health department are scientifically worthless as a record of disease conditions, because the "cause of death" represents the clinician's particular opinion of his patient expressed in two or three words to conform with a certain classified list.

Ideal records should come from a great institution that cares for patients suffering from every kind of ailment, where every body is thoroughly examined after death.

I want to mention a few things from personal experiences in the autopsy room. The number of bodies examined—approximately 400—is very small when compared with thousands seen by profoessional pathologists, but it must be remembered that thorough autopsies which include examination of the brain, spinal cord, joints and muscles require a great deal of time, and for a general practitioner to amass a large quantity of the right kind of material, a lifetime would already have been spent.

Meckel's diverticulum is considered a rarity, but I found it present as frequently as I found any trace of peptic ulcer. It occurred in about one per cent of all bodies examined. Peptic ulcer is frequently diagnosed and treated, but brain abscess is seldom considered clinically. In my records there were almost as many brain abscesses as there were scars of ulcer of the stomach or duodenum. Abscess of the pancreas is considered something quite unusual, but I found it present in ½ of 1 per cent of all of the bodies examined—as frequent as tetanus. Rabies was demonstrated in ½ of 1 per cent of the cases.

Of the many cases clinically diagnosed as "pituitary disease" and "Addison's disease," less than 20 per cent revealed pituitary or suprarenal gland changes at autopsy. But a few had changes in these glands that were not diagnosed clinically.

Notorious at autopsy were the advanced changes missed clinically that occurred during the last few days of existence—such things as hydrothorax, multiple metastatic abscesses, peritonitis, edema of the brain coverings.

It was also striking how frequently metastatic carcinoma with a small primary growth in such places as the prostate gland or suprarenal body was missed, being labeled clinically "pernicious anemia," "senility" or "flu."

Among the lesions most frequently encountered were those due to carcinoma, tuberculosis, syphilis, and those associated with cardiorenovascular disease such as scarred kidneys and heart, and cerebral hemorrhage or thrombosis.

Lung abscess was mistaken for tuberculosis and tuberculosis for Hodgkin's disease. "Globus hystericus" proved to be esophageal carcinoma. "Pernicious anemia" was frequently a bleeding duodenal ulcer, "anthrax" a strepococcic septicemia, and "skull fracture" poisoning from carbolic acid.

These things teach us that regardless of specialties, *there are certain lesions that occur in the body at a regular percentage, and the lesions are not rare, unusual, or undiscovered conditions, but are standard things.* It behooves us then, not to look for the new diseases in our patients but to force upon ourselves a broader vision, including the things that are distasteful or less appealing to us, on the basis of their actual occurrence as shown by reliable statistics.

Then in our studies and work with patients we will be mindful of the frequency or infrequency of lesions that develop in the human body.

Fighting Anemia

ELMER A. MINER, M.D. Independence, Kan.

Read before Montgomery County Medical Society, Feb. 18, 1927.

A quarter of a century ago, the medical student was handed a textbook on medicine and told by the learned professor to mentally feed upon typhoid fever. He was further told that a full knowledge so obtained was the key to at least one-half the practice of medicine. Then came a period of better sanitation followed by immuniza-

tion, until typhoid has become relatively rare in many localities. Now the medical thought has entered the arena to combat other diseases. Among these receiving special attention is pernicious anemia.

Prior to the year 1912, I had seen about a half-dozen cases of this particular malady. In June of that year my own mother succumbed to that disease, at the age of 64 years. In Nov. of 1925 I was called to another state to see a sister suffering from a profound anemia. This sister is now 58 years old. Then in June of 1926, I myself became ill. A local doctor met me on the street, remarking to me, "You look anemic." As a matter of fact I looked the part; I was more sick than I then thought.

In the early months of last year (1926), I first noticed that I had considerable dyspnea on walking about, or in the exercise of moderate muscular effort. My first thoughts were of either pulmonary or cardiac deficiency. I also noticed that my finger tips were decidedly pale, likewise my lips. Slight hemorrhages from accidental bruises showed a light red blood. About this time nervous symptoms began to develop; such as, indefinite pains about the lower limbs; skin sensitive to the touch; photophobia and blurred vision; hearing very acute—all noise distracting. A blood count on July 6th revealed R.B.C., 2,400,000 and Hb., 55 per cent. Urine showed albumin. I was quite fully aware that I was in for a siege.

On the 19th of July we left for Williams Bay, Wisconsin. It was there on the next day after my arrival that I took to my bed to remain for a period of eight weeks. During the first four weeks of enforced rest, my symptoms remained about the same with only slight improvement. A regular physician from the town of Lake Geneva was giving me treatment with "hypo's" of cacodylate of sodium. This was with mutual consent. I was also taking the time-honored Blaud's pills by mouth. Here the R.B.C. count was unchanged, perhaps lower, and the Hb had fallen to 49 per cent. At the end of the fourth week, counsel was had from Chicago. It was then that new methods were introduced, which led to a speedy recovery.

Considerable attention has been given in the last few months relative to the treatment of pernicious anemia. This being the diagnosis attached to my trouble, I am pleased to report how it works at least in one case, that of my own.

For two or three centuries the medical profession has recognized and treated pernicious anemia. From time to time it has been suggested that diet had some relation to this disease. Quite recently it has been well demonstrated by Minot and Murphy of Boston that pernicious anemia is due to a starvation process on an incomplete diet. That is to say, the individual prone to the disease requires a special diet. Working on this plan Minot and Murphy have formulated a diet for patients with pernicious anemia—a diet composed of foods "rich in complete proteins—particulary liver—and containing an abundance of muscle meat, fruits and green vegetables and low in fat." The patients daily rations in order of assumed importance are:

"(1) Liver (calves', beef, chicken) or kidneys (lamb) freshly cooked. At least 120 gms., preferably 200 gm. or more, (cooked weight)." Now the problem of taking this very first and most important item of diet is not always easy, neither for the patient nor for the physician to effectively prescribe. Often the patient rebels and then the physician must be ingenious. For me I find that calves' liver weighing 3 to 3½ lbs. is most palatable. I use the packing-house variety if fresh country livers are not to be had. The liver is sliced; put through a meat grinder; steamed for one hour, and then pressed through a colander with a wooden potato-masher. Of this liver paste, or butter, I take 120 gms. dissolved in a glassful of hot water twice daily, or 240 gms. total. This is taken before meals. The value of the liver is in the complete proteins, iron and vitamins content.

"(2) Fruits, preferably fresh, especially peaches, apricots, pineapples, strawberries, oranges, and grapefruit—about 400 gms. Raisins desirable; allow them to be eaten freely." To this list of 6 or 7, I have added for variety, blackberries, cranberries, lemons, muskmelon, watermelon, raspberries, apples, blueberries, pears and prunes. This part of the diet is enjoyable. It is comparatively easy for the patient to take the full amount. The fruits furnish the vitamins and have a laxative effect.

"(3) Red muscle meat, trimmed free of fat, freshly cooked; 125 gms. or more. Beef heart desirable." This list can be further extended to include lean cuts of lamb or mutton. Then too sweet-breads, tongue, and fowl may be added. To one inclined to be a vegetarian, this part of the diet is quite formidable. However one should readily become accustomed to most any kind

of diet, especially when one's health is at stake. These meats supply the ever needed protein factor, so necessary in combating anemia.

Perhaps the most difficult part of the diet as laid down by Minot and Murphy is the next group, or number.

"(4) Vegetables containing 1 to 10 per cent of carbohydrates, preferably fresh; cooked or raw. Not less than 300 gms. Lettuce, spinach, asparagus, cabbage, and tomato especially desirable." This list can safely be enlarged by adding string beans, Brussels sprouts, cauliflower, mushrooms, beets, carrots, onions, squash, and turnips. Those vegetables richer in carbohydrates; such as, potatoes, rice, etc., may be used occasionally, but should not take the place of the better adapted articles. This group gives many of the vitamins, supplies calories, and furnishes bulk. The patient should have copious helpings of these, in order to get a sufficient and well-balanced diet. These groups thus far are the requirements. Now the authors have added some of the "don'ts" or restrictions.

"(5) Fats restricted, not over 70 gms, Avoid cheese, bacon, fried food. Allow but little cream and butter and not over one egg. Use mineral oil for salad dressings."

"(6) Avoid grossly sweet foods, yet allow sugar sparingly."

"(7) Starchy foods, as cereals, potato, breads, add to suit individual desires, but not to exclusion of the requirements given above. The starchy foods best be crusty or dextrinated. Whole wheat toast is desirable."

"(8) Milk best be limited to about 240 gms."

"(9) Avoid excess of salt."

"(10) Tea and coffee as desired." (not a restriction).

These ten points complete the decalogue of a full diet. All food should be carefully weighed, so that the proper proportions can be obtained. At first and for perhaps two or three weeks, the patient will eat sparingly. However, as a rule, one gets "ravenously hungry," and soon gets quite ready for the complete line of prescribed diet. One should consume about 2500 calories of food, divided as follows: protein, 135 gms.; carbohydrate, 340 gms., and fat 70 gms.

Finally, as a matter of fact, we are interested in knowing how the diet works. In the Minot-Murphy series of 45 cases, treated as prescribed, some for two and one-half years, all showed remarkable improvement. In my own case, I am not an exception to the rule. My blood count has changed from R.B.C. 2,400,000 in Aug. 1926 to R.B.C. 4,920,000 in Jan. 1927. The Hb. has responded respectively from 49 per cent to 85 per cent. The lemon tint has given way to the rouge—not the kind obtained from the drug-store but rather the meat-market kind. Nervous symptoms have decidedly improved. Muscular strength has been nearly fully regained. My course having been interrupted early, the cord symptoms as yet have not chanced to develop. General health has been quite satisfactory. We know not what further suggestions as to treatment are in store for us patients with this profound anemia. Thus far I have escaped transfusions, splenectomy, etc. At times I am inclined to place myself in the list of so-called "cured." Yet to be more exact I am now saying, "recovered."

Suggestive Menus for Use in Anemic Cases

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In reviewing the work concerning the effect of iron in nutrition one finds it closely interwoven with the work on blood regeneration. Sherman (Chemistry of Foods and Nutrition, 1925 edition) points out in his discussion of "Iron in Food and Its Function in Nutrition" that "the formation of hemoglobin in the body calls not only for iron and for the ordinary amino acids but also for the characteristic organic radicles of the hematin group." Bunge called these radicles "hematogen" which he said were the precursors of hemoglobin. These radicles or some of them are found also in chlorophyll and in the related pigments. Robertson in his "Principles of Biochemistry" says "There is every reason for supposing that the pyrolle group cannot be synthesized by animals but must be obtained by them preformed; that is to say, from the tissues of plants or from the tissues of animals which acquired it from plants. This pyrolle grouping is contained in small amounts in the majority of proteins and it forms a very important component of chlorophyll, the green coloring matter of plants, which . . . . is very closely related to hemoglobin."

Hill has employed the importance of the supply of such pigment substances in the diet of infants. (Boston Medical and Surgical Journal, August 21, 1924).

M. S. Rose (J.B.C. Feb., 1926) has

shown that systematic feeding of egg favored hemoglobin formation in growing children even when the iron content of the diet appeared adequate.

The recent work of Hart and co-workers (J.B.C. Vol. 72, p. 299, March, 1927) where they have been able to cure anemia, induced in rabbits on a whole milk-Fe_2O_3 diet, by feeding the *ash* of lettuce or the *ash* of cabbage seems to point to the fact that "the deficiency of cow's milk in respect to its anemia-producing properties is not an organic principle but something of inorganic character resident in the ash of certain plant and animal tissue." This being true it is going to be necessary for us to readjust our thinking of the factors necessary in blood regeneration. Their work substantiates the fact that whatever the factor or factors may be they seem to be found in plants rich in chlorophyll.

Although the iron content of milk is low, metabolism experiments have shown that the body is able to utilize to better advantage the iron received in food when there is a good supply of calcium present. Since milk is our principle food for calcium it is well to include a generous amount of it in a daily diet in cases of anemia.

Whether we shall continue to say that we need not only iron but the precursors of hemoglobin for the body to build hemoglobin, or change the term precursors to some other factor or factors remains to be seen. We do know that the foods now considered most effective in aiding blood regeneration are fresh green and yellow vegetables, organic tissues of animals, egg yolk and the whole grains; hence a generous supply of these should be furnished daily.

Below is given sggestive menus for one week for utilizing these foods in the diet.

MONDAY

Breakfast — Sliced oranges. Oatmeal, cream, sugar. Soft boiled eggs. Toast, butter. Coffee, tea, milk or cocoa.

Lunch—Creamed onions. Liver salad, mayonnaise. Graham bread, butter. Banana pudding, whipped cream. Milk to drink.

Dinner—Breaded liver, scalloped potatoes, buttered green peas. Cabbage, carrot salad. Whole wheat bread, butter. Fruited Jello, whipped cream. Milk to drink.

TUESDAY

Breakfast—One-half grapefruit, Life o' wheat, cream, sugar. White sauce omelet. Whole wheat toast, butter. Coffee, tea, cocoa or milk.

Lunch—Liver, panbroiled, with parsley butter and lemon. Mashed potatoes, carrot perfection salad. Whole wheat bread, butter. Chocolate blanc mange, whipped cream. Milk to drink.

Dinner—Cream of pea soup. Braised liver with vegetables. Potato balls in cream. Head lettuce with mayonnaise. Whole wheat bread, butter. Prune pie. Milk to drink.

WEDNESDAY

Breakfast—Sliced oranges. Wheatena, cream, sugar. Creamed liver. Toast, butter, coffee, cocoa or milk.

Lunch—Liver in cabbage leaves. Combination vegetable salad. Graham bread, butter. Apricot dainty. Milk to drink.

Dinner—Cream of split pea soup. Liver and onions. Baked potato. Buttered carrots. Shredded lettuce salad. Baked custard, whipped cream.

THURSDAY

Breakfast—Stewed prunes. Pettijohns, cream, sugar. Liver broiled with bacon. Toast, butter. Coffee, cocoa or milk.

Lunch—Italian spaghetti. Shredded lettuce salad. Graham bread, butter. Date pudding, whipped cream. Milk to drink.

Dinner—Mock terrapin. Stuffed baked potato. Kale. Wilted endive. Tapioca cream, whipped cream. Milk to drink.

FRIDAY

Breakfast—One-half grapefruit. Oatmeal, cream, sugar. Eggs scrambled in cream. Toast, butter. Coffee, cocoa or milk.

Lunch—Breaded liver. Creamed new potatoes. Carrot-cabbage salad. Graham bread, butter. Sliced oranges with cocoanut. Milk to drink.

Dinner—Stewed liver with mushrooms. Baked potatoes. Buttered green peas. Sliced tomato salad. Whole wheat bread, butter. Prune whip, whipped cream, milk to drink.

SATURDAY

Breakfast—One-half grapefruit. Pettijohn, cream, ¾ sugar. Broiled liver and bacon. Coffee, cocoa or milk.

Lunch—Cream of pea soup. Liver salad. Creamed cauliflower. Graham bread, butter. Gingerbread, whipped cream.

Dinner—Baked liver with bacon, creamed potatoes. Spinach. Vegetable combination salad. Graham bread, butter. Ice cream, cake.

SUNDAY

Breakfast—Sliced oranges. Oatmeal, cream, sugar. Pineapple omelet. Toast, butter. Coffee, cocoa or milk.

Dinner—Liver, Italian style. Buttered green beans. Stuffed baked potato. Cabbage salad. Whole wheat bread, butter. Caramel nut custard, whipped cream. Milk to drink.

Supper—Creamed liver on toast. Buttered carrots. Shredded lettuce salad. Whole wheat bread, butter. Fruited Jello, whipped cream. Milk to drink.

RECIPES

The following recipes give a variety of ways for using liver that will keep the patient from tiring of it.

LIVER SALAD

Cubed liver (cooked), 1 cup; cabbage, shredded, ½ cup; gr. pepper, chopped, 1 tbsp; carrots, raw, ground, ½ cup; onion, chopped, 1 tbsp; mayonnaise. Maranade cubed liver for 1 hour. (A good maranade is made by mixing 3 parts vinegar with 1 part mazola, adding salt to taste). Drain, add vegetables to liver and add enough mayonnaise to moisten. Serve on crisp lettuce leaf, garnish with mayonnaise and parsley.

MAYONNAISE DRESSING

1 egg, whole; 2 tbsp. vinegar; 1 tsp. salt; ½ tsp. mustard; 1 tsp. sugar, 1 cup Mazola. Beat egg slightly, add vinegar gradually, stirring, then add dry ingredients. Mix well. Begin adding oil tablespoon at a time. As the dressing begins to thicken the oil may be added in larger quantities. Adding the vinegar to the egg lessens the danger of the dressing separating. For final seasoning, taste, because seasoning is largely a matter of personal taste. Use Dover egg beater for mixing.

BANANA PUDDING

3 bananas, slice thin; 1 cup sugar; 4 eggs; ¾ cup dry cake crumbs; 1 cup milk; 3 tbsp. lemon juice; 2 tsp. grated lemon rind; ¼ tsp. salt. Sprinkle the sugar over the bananas. Beat 2 whole eggs and 2 yolks with the bread crumbs and milk for 2 minutes. Add lemon, stir in bananas. Pour in greased baking dish. Cook in hot oven 15 minutes. Make a meringue of the other 2 whites and the rest of the sugar. When the pudding is set, add the meringue. Return to oven to brown slightly. Serve hot or cold with a sauce or whipped cream.

BREADED LIVER

1 slice liver, 4x6x½ inches; 1 egg; 2 tbsp lemon juice; ¼ tsp. salt; pepper if desired; ½ cup bread crumbs; ½ tbsp. fat. Pour boiling water over liver. Let stand 7 minutes; drain; remove the membrane. In the meantime have the egg slightly beaten, add lemon juice, salt and pepper. Dip slice of liver in egg, roll in crumbs and again in the egg. If care is taken practically all of the egg will be used up. Place in a pan containing the melted fat. Set in a hot oven (375° F) for 25 minutes.

CARROT PERFECTION SALAD

1 box lemon jello; 2 tbsp. vinegar; 1⅞ cup boiling water. Dissolve the jello in the boiling water, add the vinegar and just as it begins to harden add 1 cup ground raw carrots, ¼ cup shredded cabbage. Pour into wetted mold to set and serve on lettuce leaf with mayonnaise.

LIVER—PANBROILED WITH PARSLEY BUTTER AND LEMON

1 lb. liver, slice ½ inch thick; 2 tbsp. fat; salt, pepper, flour. Melt fat in frying pan. Prepare liver as above. Salt, roll in flour; place in pan containing the melted fat and panbroil slowly or the edges will curl and be leathery. Allow ten minutes for rare, fifteen minutes for well done. Flour may be omitted if desired. For parsley butter cream 2 tbsp. butter, 1 tsp. lemon juice and 1 tbsp. minced parsley. Serve on panbroiled liver, also add slices of lemon.

BRAISED LIVER WITH VEGETABLES

Dice 1 carrot, 1 turnip, 1 onion and 1 stalk of celery and arrange in the bottom of a baking dish. In a calf's liver make 2 incisions about 3 inches apart, in which insert strips of bacon or salt pork and place the liver in the baking dish on the bed of vegetables. Add 2 cups stock or hot water, a bit of parsley and a bay leaf and 2 cloves. Cover and bake in a moderate oven for 2 hours or until tender. Remove to a hot platter, placing the vegetables around it. Make a gravy in the pan, using 1 tbsp. butter, 1 tbsp. flour, 1 cup liquid from the meat, adding hot water, if there is not enough left in the pan.

CREAMED LIVER

1 cup whole milk; 2 tbsp. fat; 2 tbsp. flour; 1½ cup liver, cubed; salt and pepper. Melt the fat in a sauce pan, add flour, stir until smooth, add milk and stir until it thickens. Add cubed liver, salt and pep-

per. Cook the liver about 12 minutes. (If calf liver; beef liver will require longer and probably more liquid). The liver discolors the liquid, but the result is most savory.

LIVER IN CABBAGE LEAVES

1 cup (½ lb) cooked liver, diced or minced; 1 cup cooked rice; 1 egg; 1 onion, minced; 1 tbsp. fat; 1½ cup tomato pulp; ½ tsp. salt; 10 to 12 cabbage leaves. To prepare the cabbage leaves, wash the cabbage as usual, separate the leaves, pour boiling water over them, let stand 5 minutes. Have ready the well seasoned minced liver mixed with the rice and egg. Drain the leaves, put 2 to 4 tbsp. of the filling on each leaf, roll the leaf, fasten with a toothpick. Melt the fat in sauce pan, fry onion in the fat 3 minutes. Lay the rolled leaves on the onion with the folded edge down. Cover with 1½ cup tomato pulp. Cook slowly 2 hours. Do not try to move them as they will fall apart. The secret here is to have the filling for the leaves well seasoned.

LIVER AND ONIONS

1 slice liver, 4x6x½ inches. Prepare as above. 1 small onion; 1 tbsp. fat. Panfry the onion in the fat. Possibly some water, 1 or 2 tbsp. will have to be added before the onion is tender. When onion is tender, remove and keep hot. Panbroil liver brown on one side (about 2 minutes), turn, lay onions over top and finish cooking. (About 15 minutes in all for well done.) Serve hot with onion on top.

LIVER BROILED WITH BACON

1 slice liver, ½ inch thick; 1 slice bacon; salt, pepper, flour. Prepare liver for cooking in the usual way. Salt, roll in flour, place on broiler with the slice of bacon on top. Turn in about 2 minutes, keeping the bacon on top. After it has been turned and the bacon is crisp, remove the bacon, keep hot while the liver finishes to cook. 10 to 12 minutes is long enough.

ITALIAN SPAGHETTI

1 medium onion; ½ tbsp, butter; ¼ lb. beef liver, diced; ½ cup tomatoes, canned; 2 tbsp. strong American cheese. ½ tbsp. minced parsley; ½ tsp. salt; dash of pepper; ½ cup uncooked spaghetti; 3 cups boiling water; 1 tsp. salt. Brown onion in fat, add sliced liver, parsley, salt and pepper. Cook 10 minutes, add tomatoes and simmer 20 minutes. Meanwhile cook spaghetti in salted water 15 minutes, drain. Pile on a hot platter, sprinkle with cheese, pour meat mixture over the spaghetti. Serve hot.

MOCK TERRAPIN

1 cup brown sauce (2 tbsp. fat, 2 tbsp. flour, 1 cup brown stock or hot water); 1½ cup liver cubes; ½ cup chopped mushrooms (canned); ⅛ tsp. paprika; ½ tsp. salt; 2 tbsp. lemon juice. Make brown sauce, add remaining ingredients, cook 10 minutes. Serve in ramekins with sliced hard cooked egg over the top.

LIVER, STEWED WITH MUSHROOMS

Melt 1 tbsp. crisco and add 1½ tbsp. flour. Brown with long, slow cooking, add salt, pepper and 2 cups water, cook until as thick as good cream. Have 1 lb calf's liver cut in 2-inch cubes. Pour boiling water over them and drain immediately. Drop these cubes into the brown sauce and cook slowly for 10 to 12 minutes. They must not cook rapidly or too long. In the meanwhile cook lightly ½ cup canned mushrooms which have been sliced, in 1 tbsp. fat. Just before taking the liver up, add the mushrooms. Serve hot.

BAKED LIVER AND BACON

Select beef liver, wash it well, rub it with crisco and place it in a maranade (use the one suggested for liver salad) with a chopped shallot, a little chopped parsley (if on hand), salt and pepper to suit taste. Let it stand over night. The next morning pour off most of the maranade, add a few strips of bacon and bake in oven, basting frequently with the maranade. When done (allow about 30 minutes) make a brown gravy and serve very hot with slices of lemon.

LIVER, ITALIAN STYLE

3 sprays parsley, minced; 1 medium onion, minced; ½ cup small mushrooms, sliced (canned); 1 tbsp. fat; ½ cup non-alcoholic sherry (may use ¼ cup water and ¼ cup vinegar); 1 lb. liver sliced ½ inch thick; 6 slices of bacon. Melt the fat in a sauce pan, add sherry, spread chopped material over it, lay on the sliced liver, then the bacon, repeat if necessary, leave bacon on top. Cover close and cook for about 1 hour. Serve hot.

METHOD OF USING BEEF LIVER

Have beef liver cut ½ to ¾ inches thick. Pour boiling water over it and let stand 7 minutes. Remove membrane. Rub both sides with crisco or other fat. Pour vinegar over liver, covering about ⅔. Let stand all night, then use as calf's liver. Liquid plus a little water may be used for gravy. Sweet milk may be used instead of vinegar. Let stand in milk 4 or 5 hours.

Invite the Public

J. T. Scott, M.D., St. John, Kansas

In company with some twenty or thirty Secretaries of County Societies I attended a luncheon given them during the Hutchinson session of the State Medical Society. Questions of importance that related to the activities of the County Units in supporting and promoting the growth and welfare of the State Society were discussed. Most prominent among these questions was how to obtain better attendance at the regular meetings of the County Societies.

The Stafford County Society had this difficulty to meet and has for several months been following a plan that has removed it completely. Since it has worked successfully in this County it should do so in other Counties. Knowing that most County Secretaries are seeking helpful suggestions I am constrained to report this plan for the benefit of all who care to employ it. It is simple and endows the local Society with a dual function, in other words it kills two birds with one stone. It furnishes the physician an opportunity each month to discuss perplexing medical problems and be informed on the latest developments, at the same time it educates the public regarding the accomplishments of scientific medicine.

The Public Relations Committee of the State Society depends mainly upon the County Societies as the means through which the public can be reached and educated. The accomplishments of scientific medicine, particularly in the last half century, border on the miraculous, yet quackery in every imaginable form flourishes as a green bay tree. Can this be attributed to anything save ignorance? Evidently not. We are thus provided with the means of removing this deplorable condition which is in a word education.

Physicians can no longer treat the public with patronizing condescension. They must be taken into our confidence and educated to a realization of the chasm that separates quackery from true medicine. With this as the main objective this Society, four months ago, inaugurated the plan of inviting the public to attend its regular monthly meetings. The immediate results surpassed our most hopeful desire. At no meeting has there been less than thirty lay people and the last meeting, July 13th, reached an attendance of more than fifty. The most surprising thing was the intense interest manifested by the audience in papers and addresses on technical medical subjects, and the comments to be heard after the meeting and for days following. The programs were not exclusively medical. Other numbers, such as readings, music, etc., were presented and light refreshments served.

These meetings have demonstrated that the idea the public is not interested in subjects pertaining to scientifc medicine is a fallacy. They are interested and from our experience intensely so. Our Society is small and with a 100 per cent attendance less than a dozen. Scarcely ever did we have more than five or six but we are now assured of a good audience. The plan has also served to stimulate a better attendance on the part of the membership. At our public meeting in July the membership attendance was over 80 per cent.

By adopting this method a Society can be assured of better attendance and the opportunity to reach the qublic in a more effective way than by news paper propaganda or pamphlet distribution. It does impose some additional work on the Secretary and its success will depend largely upon his enthusiasm. However, County Secretaries are as a rule active and enthusiastic, anxious to accept and adopt any method that promises to enlarge the influence of the Society and stimulate attendance. The idea that the President of a Society is practically a figure head, carrying no responsibility save that of presiding at meetings, is a fallacy. The President should feel equal responsibility with his Secretary, should consult with him and give constant aid and encouragement. The President of our Society is such an aid. He is active, enthusiastic and rarely ever misses a meeting. Our moderate success is due in considerable measure to an efficient President.

UNIVERSITY OF KANSAS CLINICS

Clinic of Donald R. Black, M.D.

Department of Medicine

A CASE OF CHRONIC LYMPHATIC LEUKEMIA

J. I., a Jewish merchant, age 46, came in complaining of weakness, general enlargement of lymph glands and enlargement of the abdomen.

His past history had been unimportant, in fact he was feeling perfectly well and actively engaged in his business until June last when he began to complain of malaise. His doctor thought he had been working too hard and prescribed a rest, which advice the patient reluctantly followed. About

a month later he noticed enlargement of the cervical glands occurring simultaneously on both sides. A few weeks later he noticed axillary involvement closely followed by inguinal enlargement. He then noticed a swelling in the left upper abdomen. His doctor had made a diagnosis of lymphatic leukemia. His blood count was reported to be Hg. 68 per cent Dare. RBC. 3,630,000, WBC. 185,000 with 90 per cent large lymphocytes.

He was given 10 x-ray treatments over the spleen and involved lymph glands. His blood count dropped to 20,000 but the enlargement of his lymph glands persisted.

I saw him first December 28th, 1926. He presented a quite remarkable picture. He had a very conspicuous collar of glands about the size of one's fist—occupying both cervical regions, giving the neck quite as large a diameter as the head. Glands about the size of hen's eggs were in both axilla and the epitrochlear glands were enlarged. Large masses of glands were present in both groins. The spleen was very large and tense, felt in the middle abdominal line and extending to the crest of the ilium. The glands were distinct and rather soft. None of the abdominal glands was palpable and the stereoscopic negatives of the chest revealed no definite involvement. The blood count was Hg. 65 per cent Dare,. RBC. 3,320,000, WBC. 16,800 and large lymphocytes 86 per cent.

I suggested further x-ray therapy which he refused, saying that the x-ray did not make his glands disappear, nor did it relieve his weakness.

With little or no scientific foundation I decided to try Coley's Fluid, which is a mixture of toxines for streptococcus and bacillus prodigiosus. He was given, for the first dose, ¼ drop which was followed by a chill in six hours. He was later given increasing doses at four day intervals for six doses, each dose being followed by chills, fever and sweats. In two weeks the cervical glands had diminished to such an extent as to be barely visible. His appetite returned and he was able to eat a Minot-Murphy diet of 3500 calories. The remainder of the enlarged glands had diminished in about the same proportion as the cervical glands. The white blood count promptly dropped to 2,300 with 46 per cent lymphocytes. The anemia remained constant. I was afraid with such a low blood count hemorrhages might occur, consequently he was given two blood transfusions of 500 cc each at five day intervals. His hemoglobin increased to seventy per cent, RBC. to 3,800,000, and WBC. to 3,800 with forty-six per cent lymphocytes. He was sent home with instructions to rest ten hours at night, two in forenoon and afternoon. To take Fowler's solution, eight drops at meal time, and to continue his Minot-Murphy diet.

He reported at the office today, February 25, 1927, feeling much better than when he left the hospital two weeks ago. There was further diminution in size of the lymph glands and marked diminution in size of spleen; had gained eight pounds in weight and was feeling much better. His blood count was 76 per cent Dare. RBC. 3,860,000; WBC. 6,300, Palys. 46 per cent. Large L. 24, Small L. 22, L.M. 6, E. 2.

I gave him .6 grain neosalvarsan, and advised him to continue his routine diet and Fowler's solution and to return in one month.

Of course we can only speculate as to what happened. Coley originally had in mind a specific nature of serum and reported some striking reversions in the course of sarcoma. Several lympho sarcoma cases were reported in which marked improvement followed the use of the fluid I simply followed a blind suggestion and the subsequent course will determine its value.

Clinic of Dr. C. B. Francisco

Department of Orthopedics

TENDON SHIFTING AND TENDON TRANSPLANTATION

The indication for tendon transplantation or tendon shifting is to establish muscle balance. Deformity never occurs in muscle paralysis if the muscle balance is not disturbed. If all of the muscles of the foot are paralyzed deformity does not occur but the foot becomes flail and the indication then is for stabilization. If one group is weakened the opposing group contracts which pulls the foot into a deformed position. If weight bearing is continued over a long period of time, deformity of the bones results and in such cases bony operations must be combined with tendon transplantation.

The operation we propose to do today, June 28, is known as the Whitman Loop Operation, devised by Dr. Royal Whitman of New York.

The child we are operating upon is B. W., age 5, who had infantile paralysis when 2 years old which resulted in complete paralysis of the tibialis anticus and posticus of

the left foot. This has resulted in an equino-valgus or flat foot type of deformity. The tendo-achilles has contracted and the peronei tendons together with the dorsal extensors of the toes have combined to pull the foot outward so that it is no longer under the leg. The first step in the operation is to do a subcutaneus tenotomy of the tendo-achilles. This allows us to bring the foot up. A long incision is then made over the dorsal surface of the foot and the annular ligaments divided. The peroneus tertius tendon is lengthened by freeing its periosteal attachment to the bone without dividing it, and the extensor tendons of the toes are freed with their sheaths so that it is possible to displace all of them well over toward the inner side of the foot. The tendon of the extensor propius hallicus is then divided near the base of the great toe joint. The anterior tibial tendon is divided about 1½ inches above the ankle joint leaving its sheath intact, and is pulled out of its sheath near its attachment. Through a separate incision on the outer side of the foot the peroneus brevis tendon is divided and pulled out through a separate incision on the outer side of the foot about 2½ inches above the external malleolus and passed subcutaneously to the original incision on the front of the foot and through the empty sheath of the anterior tibial tendon. A groove is then made in the internal cuneiform bone near the attachment of the anterior tibial tendon and the ends of the peroneus brevis and extensor propius hallicus are passed through the groove and sutured firmly to the periosteum and base of the anterior tibial tendon attachment. The distal end of the anterior tibial tendon is passed under the dorsal extensor tendons of the toes and the peroneus tertius tendons which are displaced well over to the inner side of the foot, then passed upward and over these tendons and fixed in a groove in the tibia just above the inner malleolus. The incisions are closed and a cast will be applied with the foot well over corrected. We cannot get too much over correction so will place the foot in as extreme attitude of varus as possible. This cast should be worn about 6 weeks when we will apply a celluloid foot form brace which will be worn about a year.

My experience with this operation has been most satisfactory. No muscle training is required. The important point in the after treatment is not to allow weight bearing except in the over corrected position for a year.

Pasteur Up to Date

It was Pasteur, as every one knows, who first proved that the bite of a rabid dog was not necessarily fatal; more than that, that the development of hydrophobia in the case of a person so bitten could be prevented with almost absolute certainty. The protective agent was the attenuated virus of rabies, from the spinal cord of a rabid dog, and the doses differed from each other in the degree to which the virus had been attenuated—first a very weak dose, then a stronger, and so on, the object being, of course, to develop resistance in the patient before the end of the incubation period of the disease. The method itself was considered so dangerous by Pasteur himself that he hesitated to use it on a human being when the opportunity arose. But it has since that time saved unnumbered lives.

Pasteur was the pioneer. Since his time a method has been discovered for eliminating entirely the element of danger from the use of rabies vaccine, without the least sacrifice of protective effect, so that now there is no possibility of harm resulting from the proper use of the improved vaccine, and the record of successful inoculations is 100 per cent to the good.

The virus is not merely attenuated, but killed, in the Cumming Vaccine, marketed by Parke, Davis & Co., and all the doses are alike, thus rendering this product different not only from the original Pasteur product, but from bacterial vaccines. In the use of bacterial vaccines the doses are graded, but this is not the case with the Cumming vaccine. It is quite apparent from the results reported that immunity does not in this case depend upon graded doses, but only upon the use of an active vaccine administered daily for the required period—14 days or 21 days, according to the location and severity of the wound.

Parke, Davis & Co. offer a 24-page illustrated booklet on Rabies to medical inquirers.

DEATHS

E. L. Wilson, Jr., Marysville, aged 49, died of apoplexy, June 6, 1927. He graduated from the University Medical College, Kansas City, Missouri, in 1902.

Rollo Carlton Dugan, Ottawa, aged 62, died of carcinoma of the larynx, June 10, 1927. He graduated from the University of Minnesota Medical School, Minneapolis, in 1890.

THE JOURNAL
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W. E. McVEY, M.D. - - Editor

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THE SEDUCTIVE GOLD BRICK

It has been said a great many times that doctors are "easy marks," that they have an unusual avidity for "gold bricks." It has been repeated so frequently that some people believe it, even the doctors themselves.

Some of them have been known to invest in gold mines that did not prove to be very rich, so have bankers, merchants and lawyers. They have occasionally invested in oil well prospects that failed to materialize, so have men in most every other line of business.

To cinch the argument one writer calls attention to the endless amount of useless junk that may be found in any doctor's office who has been in practice for twenty or thirty years. On the face of it the argument might be good. Fifty years ago nearly every practitioner had a magnetic battery that was worked with a crank and in a good many cases they believed and the patients believed the treatments were beneficial. At any rate the results led to more thorough study of electrotherapy and the magnetic battery was soon discarded in favor of an improved type of battery. Most of the doctors then had in their offices faradic and galvanic batteries—cell batteries. These were not convenient to carry around, but it was not uncommon to see one of these busy practitioners on some muddy or rough road, many miles from his office, carrying one of these batteries in his hand while a boy drove his team. Sometimes he would carry the battery over his round of calls so that he might use it on one or two of the patients he saw. He had to carry it in his hands so the fluid wouldn't splash out over everything, and because if it did splash out the battery wouldn't work.

Next came a more elaborate development of electro-therapy, a cabinet by means of which a current could be applied to any part of the body and if desired a steam or vapor bath combined with the electric treatment. In the early eighties one of these cabinets could be found in some physican's office in nearly every fair sized town. A few of them continued to be used for the purpose for which they were constructed.

A few years later the static machine was adapted to the requirements of electro-therapy and at the time seemed to have solved all problems in this field. Some years afterwards elaborately mounted static machines could be found in doctors' offices all over the country, but most of them were used for every other purpose than the one for which they were made. This was not so much because of lack of results from treatment, but because of the difficulty of operating them.

The discovery of the x-ray diverted attention from other applications of the electric current for a time but ultimately broadened the general conception of its therapeutic possibilities. The development of electricity as a public utility quickly led to the adaptation of the service currents to therapeutic uses, and naturally the batteries and cabinets and static machines became so much useless junk. The doctors bought machines by which the city light currents could be utilized, these were discarded and replaced by improved and more serviceable ones, and as further improvements are made, junk will accumulate.

Call these "gold bricks" if you like, but it has been the progressive men in medicine who have bought them. No one could possibly have bought a textbook on the practice of medicine in 1900 that would answer his requirements in 1927. Along in the eighties there was published a very remarkable encyclopedia of medicine and surgery, in which subjects were arranged alphabetically and it sold for something like eighty dollars. Thousands of these sets were sold, but long before the volumes on subjects beginning with X, Y and Z were off the press the articles on subjects beginning with A, B and C were long out of date. They were the progressive men who bought this work and their knowledge of medicine and their ability to practice medicine were greatly improved by having it. The man who waits to buy his library until the last word has been written on any subject in medicine will just as quickly become an ancient as he who still depends on his encyclopedia purchased forty years ago. Just so with his equipment, for he who waits to purchase his electric machines, his instruments of precision or his surgical outfit until no further improvements are possible is not likely to make much of a commotion in the medical world.

The doctor whose office is filled with junk that he has bought in order that he might keep up with the progress of medicine and give his patients the benefit of whatever promised results cannot be classed with the "gold brick" buyer nor with the "easy marks" but with the progressive men in medicine.

On second thought there may be, now and then among the doctors, an habitual collector of the seductive gold bricks. One who has a commercial slant on the practice of medicine is very likely to fall for the persuasive arguments of the manufacturer of "business getter" apparatus. The assurance that the full equipment in one's office will increase his business one hundred per cent, accompanying an offer to install the plant for ten dollars cash and ten dollars a month, certainly does sound attractive. But it requires both commercial and medical ability to make a killing with most of these outfits, and one must also have a fairly large clientele to start with or resort to unethical methods, for only through one or the other can he successfully promote such an enterprise. Naturally he must make his money back before the particular fad loses its popularity or before newer and more elaborate machines have put his equipment in the discard. Frequently he don't. There are perhaps a few men in this part of the country, enterprising men of course, with the commercial slant, but certainly not so many or in so large a proportion to the whole profession as there seems to be in the States further east.

AN EVASION OF LAW

A law was passed at the 1927 session of the legislature providing for a board of examiners and for the licensing of cosmetologists which is supposed to mean those who operate or function in the so-called beauty parlors. Some assistance was given in the passage of this law by members of the medical profession because of the danger of communicating certain diseases in these places and because this law required that applicants for license as cosmetologists must be free from contagious and infectious diseases. Section 8 of this law contains the following:

"All examinations held or conducted by said board shall be under such rules as the board may provide and prescribe, and shall include practical demonstrations, written and oral tests, and such applicant applying therefore shall have attained the age of seventeen years, be of good moral character and have an education equivalent to the course of study required for the eighth grade of the public schools of this state, *be free from contagious and infectious diseases*, . . . "

This implies that the applicant shall present a physician's certificate to the effect that the said applicant is free from such disease.

The blanks prepared and used by the board of examiners contain a section which the applicant is required to have filled out by a physician and sworn to, but there is

no reference whatever to the health or physical condition of the applicant. This section of the application blank reads as follows:

Affidavit of Physician or Health Officer
State of Kansas
County of .....
Being duly sworn, deposes and says that he is personally acquainted with .... and said affiant further states, upon knowledge and belief that the applicant is a person of good moral character, able and trustworthy.

.....
Signature of Physician or Health Officer.
Subscribed and sworn to before me this day of ..... A. D., 192....

.....
Notary Public.
Seal
My commission expires .....

Apparently this is an attempt on the part of some one to evade the most important provisions of this law, but in reality it may have been an oversight. In any case it is incumbent upon the physicians of the state to refuse to make the affidavit according to the form provided, and if they give a certificate at all see that it embodies the information required by the law. This one requiremnt is the only purpose of the physician's affidavit; the form now provided in the application is absurd.

CHIPS

To determine if there exists an aortitis of malarial origin as claimed by French clinicians, Benhamou investigated the aorta in a number of patients with malaria. From his study of these cases by means of the x-ray he concludes that there is no aortis but a functional dilatation of the ascending part of the arch of the aorta and there is substernal pain and dyspnea.

The successful treatment of acute bichloride of mercury poisoning is reported by Manuel D. Rojas in the fifteenth annual report of the medical department of the United Fruit Company. In one case the patient had taken 22 grains of the bichloride and in another case 2 tablets, amount not stated, had been taken. Symptoms very severe in both cases. They were treated with sodium thiosulphate. Of this drug 0.50 gm was given intravenously and 1 gm dissolved in 100 c.c. of iced milk by mouth. This was repeated every day. Morphine was administered to relieve pain when necessary. Both patients recovered completely.

Kerosene is a weak antiseptic and parasiticide and irritant to the skin. Therefore: It can be used for parasitic affections of the scalp. It is of some use for seborrheic dermatitis of the scalp and, if it has any effect in preventing the outfall of hair, it is presumably due to its irritating—stimulating—effect on the skin. But it does all these things in a crude, disagreeable way. All of them can be done more efficiently and much more accurately with drugs of definite composition. Its vogue as a hair tonic and hair restorer is largely due to that popular feeling, which has come down through the milleniums from our barbarous ancestors, that the efficiency of drugs is in proportion to their disagreeableness. (Jr. A.M.A., June 25, '27).

The present evidence indicates that ergosterol is the precursor of vitamin D, that is, the parent substance from which vitamin D is formed. It is probable that the activity of cholesterol produced by irradiation, is due to the presence of ergosterol. in cholesterol. The biologic tests with irradiated ergosterol have been astounding. A daily dose of 0.0001 mg. of irradiated ergosterol has cured and prevented rickets in rats kept on a rachitogenic diet. Irradiated ergosterol is the most potent antirachitic substance known, 5 mg. being equivalent to approximately 1 liter of good cod liver oil. (Jr. A.M.A.,, June 18, '27).

In a recent report of their studies of latent tuberculosis which appeared in the July number of Archives of Pathology, Opie and Aronson state that latent fibrocaseous tuberculous lesions and many fibrous scars of the pulmonary apexes contain living tubercle bacilli. Caseous encapsulated or calcified tuberculous nodules of lungs or lymph nodes seldom produce tuberculosis when inoculated into guinea pigs unless they are derived from lungs in which there is an apical lesion. Tissue from the apex or base of the lungs in which tuberculous lesions are not present, when inoculated into guinea pigs often causes tuberculosis. They also claim that apical lesions of adult life make their appearance at a time when lesions caused by tuberculous infection of childhood no longer contain living tubercle bacilli and that they occur as the result of exogenous infection.

MEDICAL SCHOOL NOTES

Dr. Frank C. Neff and Dr. Russell L. Haden read papers before the Davis County Medical Society, Gallatin, Missouri, July 6, 1927. Titles of paper "Treatment of Summer Complaint," and "Diagnosis and Treatment of Anemia," respectively.

Dr. H. M. Gilkey is now attending the Pediatric Clinic in Berlin, Germany, where he will remain for six months.

Dr. Logan Clendening has returned from a six-months European trip where he studied at the various Medical Clinics.

Dr. L. F. Barney is abroad taking post-graduate work. He will return about the 1st of August.

Col. C. C. Nesselrode, M. D., is at Ft. Snelling, Minnesota, for two weeks training

Dr. L. B. Spake is in Vienna, Austria taking post-graduate work. He will return about August 15th.

The K. U. Medical Alumni Association Banquet will be held on Saturday, October 15th, during the Pre-Assembly Clinics and immediately previous to the Inter-Post-Graduate Assembly which will be held here October 17th to 21st, inclusive. Every effort will be made for a large attendance. The Alumni Association since its re-organization last fall is accomplishing some real work. The Association wants the support of every graduate of the Medical School.

Saturday afternoon, June 25th, the second flood of the Dispensary, Bell Memorial Hospital, was burned out, doing damage of approximately $5,000 to the building and equipment. A hasty repair was made and the Dispensary did not lose any time from its services.

SOCIETIES

STAFFORD COUNTY SOCIETY

Society met at 8:00 p. m. July 13th at the residence of Dr. J. T. Scott in St. John. This was a public meeting and more than fifty men and women, in addition to the physicians present, were in attendance. Of the Society members there were F. W. Tretbar, J. J. Tretbar, W. L. Butler of Stafford, M. M. Hart of Macksville; L. E. Mock, R. S. Stivison, J. T. Scott, of St. John.

The guests of the Society were Dr. H. C. Embry, Great Bend, Dr. M. Trueheart, Dr. H. R. Ross, Dr. Maggie L. McCray, Sterling.

This was an open-air meeting and proved conclusively that the public is interested and anxious to receive such information. Light refreshments were served at the conclusion of the program by Mesdames Mock, Stivison aad Scott, assisted by Miss Mock and Miss John.

More than half those in attendance were women and among the men every trade, profession and business was represented. Two professional ladies were present, one a graduate physician and the other a trained nurse.

Another public meeting will be held in August, the evening of the second Wednesday, and a prominent physician will be the guest and deliver an address to fit the occasion. Below is given the program of the meeting.

1. Address—Surgical Evaluation of Abdominal Pain, Dr. H. C. Embry, Great Bend.
2. Radium—Lantern Illustration, Dr. M. Trueheart, Sterling.
3. Humorous Readings—Dr. H. R. Ross, Sterling.
4. Reading — "Early Reminiscences," Miss Louise Nagle, St. John.

Every number deserves special mention. Dr. Embry's address on a technical surgical subject was clothed in simple language that the layman could comprehend and enjoy. Dr. Trueheart's paper and pictures aroused unusual interest and provoked general favorable comment. Dr. Ross gave several humorous readings, principally from Riley, and again demonstrated his ability as a royal entertainer. Miss Louise Nagle, in her usual vivacious manner gave three readings from the early reminiscences of Dr. J. T. Scott, "Goitis," "Coo-Cooitis," and "The Rheubottom Twins." If last month's meeting was a red letter this was a redder letter.

The invitations sent to the members and guests concluded fith the following verse:

Booster, Booster, Booster be,
Boost your County Society;
If you boost it as you should,
From it you will get great good.

J. T. SCOTT, Secy.

SEDGWICK COUNTY SOCIETY

The regular Sedgwick County Medical Society clinic was held at the St. Francis Hospital on July 19th. There was a large number of out of town physicians and surgeons in attendance, as well as a large attendance of the local men.

The medical clinic was held in the morning, from nine until twelve. Cases were shown, case histories given, and all cases were freely discussed by physicians present. Luncheon was served by the hospital at noon. In the afternoin the surgical clinic

was held by members of the staff of the hospital. This plan was first adopted by the Wichita Hospital at the monthly clinic of June 21st and was found to be a decided success, and very gratifying to the out of town physicians, as well as to the local men and personnel of the hospital.

The regular evening meeting of the Society was held at the Hotel Lassen, where dinner was served at six thirty.

The program of the July meeting follows:

9:00 to 12:00—Medical and Diagnostic clinic given at the hospital by the following:

Dr. C. R. Burkhead, Dr. H. E. Curtis, Dr. G. E. Cowles, Dr. Paul Carson, Dr. W. E. Cox, Dr. R. J. Dittrick, Dr. R. M. Gouldner, Dr. Martin Hagan, Dr. C. A. Helwig, Dr. Thor Jager, Dr. F. E. Kunce, Dr. L. E. Knapp, Dr. E. J. Nodurfth, Dr. L. S. Roberts, Dr. F. H. Schiltz, Dr. J. E. Wolfe, Dr. F. J. Walker, Dr. R. A. West.

Buffet luncheon served promptly at 12 o'clock.

Surgical clinics began prompetly at 1 o'clock.

General Surgery

Dr. D. W. Basham, Dr. W. P. Callahan, Dr. J. L. Evans, Dr. A. P. Gearheart, Dr. C. N. Johnson, Dr. A. D. Jones.

Eye, Ear, Nose and Throat

Dr. J. G. Dorsey, Dr. J. F. Gsell, Dr. W. G. Gillett, Dr. E. M. Seydell, Dr. O. G. Hutchinson, Dr. G. A. Spray, Dr. T. W. Weaver.

Genito-Urinary

Dr R. M. Gouldner, Dr. J. G. Missildine.

Evening Program

Dinner 6:30—Lassen Hotel

Mastoiditis—Dr. J. W. Cheney.

Stiff and Painful Shoulder—Dr. E. D. Ebright.

Something to Think About—Dr. T. T. Holt.

W. J. EILERTS, M.D., Secy.

Annual Session of the American Medical Association—Washington, D. C., May 16-20, 1927

REGISTRATION AND ATTENDANCE

At the annual session of the American Medical Association in Washington, May 16 to 20, there was a registered attendance of 6,273, meaning at least 10,000 visitors to the convention city.

OUTSTANDING FEATURES

Among the outstanding features was an address by the President of the United States, Calvin Coolidge, who conferred high praise on the medical profession for its contribution to the social organization. The President and Mrs. Coolidge also held a special reception for physicians, on the White House lawn.

The departments of the national government, including the Army and Navy medical departments, the U. S. Public Health Service and many medical bureaus, especially those of the Department of the Interior, assembled exhibitions for the visiting guests.

The publicity relative to the session in the newspapers of the country was the greatest ever given to an annual meeting of the Association. This is presumably a reflection both of the increasing interest of the public in the progress of medicine and of the co-operation between the American Medical Association and the American press. Practically all of the great press services and newspapers have special representatives in Washington. Arrangements had been made by the headquarters of the American Medical Association for aiding the dissemination of publicity through these channels, both previous to and during the session.

HOUSE OF DELEGATES

The following statement concerning the proceedings of the House of Delegates is not in any sense complete. A fuller outline has already appeared in *The Journal*, and the complete record will be printed in the official "Proceedings."

At the first meeting of the House of Delegates, May 16, ,the speaker, Dr. F. C. Warnshuis, urged continued attention to the problem of nursing education and nursing service in the United States. He suggested an attempt to solve the question of the requirements, qualifications and standards for a capable, competent surgeon and a means to aid the public in making such an identification. He also urged state licensure and special hospital legislation as a means for protecting the public against poor and incompetent institutions.

The President of the Association, Dr. Wendell C. Phillips, urged continuous attention to the education of the public in matters of health. He suggested a proper system of censorship to safeguard medical

publicity. He again recommended consideration of the restrictions placed on physicians in the prescribing of alcoholic liquors.

The president-elect, Dr. Jabez N. Jackson, urged new attention to the problems of medical ethics, and the preparation of a manual which would make clear both to the profession and to the public the intent of the "Principles of Medical Ethics."

The President of the Association appointed a committee, consisting of Drs. Ray Lyman Wilbur, Rock Sleyster, G. E. Follansbee, Harlow Brooks, and William Allen Pusey to act upon public responsibility, having to do with the relationship of the medical profession to the public.

On recommendation of the Judicial Council, the opinion was adopted that all articles of an educational nature on medical or health subjects intended for the lay press or lay audiences should give expression to the concensus of opinion of the medical profession rather than to personal views, and that such articles should appear preferably under the auspices of the American Medical Association or of one of its component county societies or constituent state associations.

REPORT ON MEDICAL EDUCATION

In considering the report of the Council on Medical Education and Hospitals, the House of Delegates adopted the report of its reference committee. This committee considered as overoptimistic the views of the Council that the present medical schools are adequate to supply places for those wishing to enter a medical school. The reference committee believed that the Council on Medical Education might devote more attention to the problems of the supply of physicians and the question of medical care in rural districts, to the preparation of a statement on the defects in the present situation and to similar subjects.

The reference committee conidered it necessary that the present curriculum be reduced materially and that any consideration of a new curriculum should give special attention to the training of general practitioners, with brief courses in the more important specialties. The recent decision of the Council to recognize as suitable for internship only hospitals in which there is a minimum percentage of necropsies was approved and recommended.

INVESTIGATION OF HEROIN

The reference committee on legislation and public relation requested the Board of Trustees of the American Medical Association to have another investigation of the use of heroin made by the Council on Pharmacy and Chemistry in conjunction with some of the scientific sections.

EVALUATION OF REMEDIES

It was recommended that the Association condemn as unwise and futile any attempt to evaluate a therapeutic agent by legislative fiat, referendum, popular vote or any similar method. The conclusion was adopted that such evaluation can be made only by the investigation and decision of experts.

DISASTER RELIEF

A consideration of the report of the committee on disaster relief resulted in the adoption of a recommendation that the American Medical Association urge constituent associations and component societies that have not already established disaster relief committees to do so as soon as possible.

MORTALITY STATISTICS

It was urged by the adpotion of a report of the reference committee on hygiene and public health that the attention of the United States Census Bureau be called to the impossibility of comparison of statements on maternal mortality of the various nations and that the bureau be urged to secure a strictly unform definition of maternal mortality by the bureaus of vital statistics of various nations.

COSMETICS

A resolution urging Congress to enact a law to control the manufacture, distribution, sale and commercial use of toilet preparations for preserving and enhancing personal beauty was referred to the Board of Trustees for action.

EDUCATION OF SURGEONS

The reference committee on the speaker's address commended the section having to do with the duty of the American Medical Association to standardize and elevate the practice of medicine and surgery within and without hospitals through its own organization, but not through legislative or other agencies.

APPOINTMENT OF DELEGATES

The reference committee urged that state societies appoint delegates in time to permit the speaker of the House of Delegates to announce the reference committees thirty days in advance of the session, so

that these committeess might give adequate attention to the various reports of officers and councils before the time of the session.

HEALTH CONFERENCES

The importance of health conferences was recognized and attempts to reduce the duplication of efforts in various fields were encouraged.

CONTRACT PRACTICE

The report of the Judicial Council of the American Medical Association to the effect that there were both ethical and unethical contracts possible, and that each contract must be judged on its own merits was approved by the committee and adopted by the House of Delegates.

CHARGES FOR SERVICES TO INSURANCE AND INDEMNITY COMPANIES

A resolution to the effect that physicians were not under any obligation to provide information to insurance or indemnity companies unless paid the usual fees charged for similar services to private patients was approved an adopted by the House of Delegates.

PLACE OF NEXT ANNUAL MEETING

The Board of Trustees was asked to investigate places for holding the next annual session and to present its approval of two or more cities which, on investigation, have been found to possess ample facilities.

The Board of Trustees has authority to change the place of holding the session if for any reason it is deemed advisable.

INCOME TAX DEDUCTIONS

A resolution requesting the promotion of an amendment to the revenue bill relating to the income tax, which gives the individual a right to deduct from his income tax the expenses of medical treatment for himself and family was referred to the Board of Trustees, with the suggestion that they in turn transmit it to constituent state societies for action.

NURSING EDUCATION

Reports of the various committees on nursing education were received by the House of Delegates, and it was recommended that the American Medical Association give support in the work of the committee on grading of nursing schools and share in its financial program. The Board of Trustees appropriated the sum of $5,000 for one year toward this end.

THE PHYSICIANS' HOME

A special committee reported on the need of a physician's home. The committee recommended that the Secretary of the Association be requested to secure full information in regard to what is now being done by the profession for aged and incapacitated physicians, in various states and cities, so that other states or component societies may take measures to afford relief for dependent, worthy physicians, their widows and their orphans who may be in need. It was recommended that the secretary make a report on this matter at the next annual meeting. The committee was convinced that the need for a national home is not sufficient to warrant the American Medical Association in establishing, managing and sustaining a home.

COLLABORATION WITH HEALTH OFFICERS

Collaboration between physicians and health officers was urged as the only method of meeting the public health situation for the good of the profession and the public.

TRACHOMA AMONG INDIANS

The American Medical Association was urged to continue its affiliations with all the activities of the United States government of the work being done by the national committee for the prevention of blindness for the elimination of trachoma among Indians.

LEGISLATION FOR COORDINATING GOVERNMENT HEALTH ACTIVITIES

The House of Delegates reaffirmed its approval in principle of the Parker bill, coordinating the health activities of the federal government under the direction of the United States Public Health Service. It also adopted the report of the reference committee recommending approval of the Ransdall bill, appropriating $10,000,000 to establish a national institute of health under the control of the Surgeon-General of the United States Public Health Service.

DISABLED EMERGENCY MEDICAL OFFICERS

The House of Delegates reaffirmed its favorable action of 1922, requesting the passage of the Bursum bill, which relates to the retirement of disabled emergency army medical officers on a parity with all other classes of disabled officers of the World War now on the retired list.

MEDICINAL LIQUOR

The report of the reference committee of the House of Delegates to the effect that hereafter the House of Delegates shall not pass any rsolution pertaining to the therapeutic value of anytthing and that no committee report empowering any such reso-

lution shall hereafter be presented until it has been considered by the Council on Scientific Assembly and the Council on Pharmacy and Chemistry was adopted. Recommendation was made that the special committee on alcoholic liquors be continued and be directed to cooperate in preparing a bill to be presented to Congress correcting the unfortunate provision of the Volstead Act limiting the amount of alcohol used, and providing such regulations as will permit doctors to prescribe whatevr amounts of alcoholic liquors may be needed for their patients, and subject to such reasonable restriction as may be thought wise and best after a conference with the head of the Prohibition Department.

It was also urged that the American Medical Association declare its adherence to the principle that legislative bodies composed of laymen should not enact restrictive laws regulating the administration of any therapeutic agent by physicians legally qualified to practice medicine.

A supplementary report of the Judicial Council recommended that "Every resolution presented relating to the alcohol question shall be referred to the Board of Trustees for investigation." The recommendation was adopted by the House of Delegates.

CAUSTIC POISONS

The House of Delegates approved the resolution extending to members of Congress the thanks of the American Medical Association for passing the Caustic Poison Act in 1927.

FORM LETTERS ON PERIODICAL PHYSICAL EXAMINATION

A resolution asking the Board of Trustees to prepare approved forms of letters or literature which may be sent out by county medical societies to the public to promote the value of periodic health examinations and information that the examinations can be made and records kept by qualified physicians who are members of the American Medical Association, in this manner helping to circumvent the harmful advertising activities of commercial agencies dealing with periodic health examinations, was endorsed by the reference committee and adopted by the House of Delegates.

CONTRACEPTION

A resolution recommending the alteration of existing laws, wherever necessary, so that physicians may legally give contraceptive information to their patients in the regular coure of practice was referred to the Board of Trustees of the Association.

HEALTH HAZARDS IN INDUSTRY

The resolution petitioning Congress to make possible an increase in the personnel and resources of the United States Public Health Service in order that the service may extend its activitiess in the field of industrial hygiene was referred to the Board of Trustees.

AMENDMENTS TO THE BY-LAWS

Notices of proposed amendments to the By-Laws: (1) defining the powers of the Judicial Council; (2) defining the legislative powers of the Association and the right of the House of Delegates to expel members for Fellows on recommendation of the Judicial Council; (3) a resolution changing the members of the Council on Medical Education and Hospitals was presented and must lie over to 1928 for action.

WOMAN'S AUXILIARY

A motion that the House of Delegates request the Board of Trustees to appoint a liaison committee between the American Medical Association and the Woman's Auxiliary was adopted.

ELECTION OF OFFICERS

In the election of officers, Dr. William S. Thayer of Baltimore was elected President of the Association; Dr. Charles A. Elliott of Chicago, Vice-President, Drs. Olin West, Secretary, and Austin A. Hayden, Treasurer, were reelected, as also were the Speaker, Dr. Frederick C. Warnshuis of Grand Rapids, Mich., and Vice-Speaker, Dr. Allen H. Bunce of Atlanta, and the trustees, Drs. Edward B. Heckel, of Pittsburgh and Rock Sleyster of Wauwatosa, Wis.

The president, Dr. Jabez N. Jackson, made the following nominations to appointments on the various councils: For the Judicial Council, Dr. Donald McCrae, Jr., Council Bluffs, Iowa and Dr. Frank Cregor of Indianapolis, to succeed Dr. Thayer; for the Council on Medical Education and Hospitals, Dr. Emmett P. North, St. Louis; for the Council on Scientific Assembly, Dr. Frank H. Lahey of Boston. These nominations were confirmed.

THE SCIENTIFIC SECTIONS

More than three hundred manuscripts were read in the sixteen scientific sections of the Association, covering many medical subjects. A complete list of the papers read with the names of the persons discussing them appears in The Journal of the American Medical Association for June 11, 1927, beginning on page 1896.

Medical Society of the Missouri Valley Preliminary Program, Des Moines, Iowa

SEPTEMBER 14, 1927—MORNING SESSION

9:30. Recent Developments in Muscle Physiology—H. W. Dahl, M. D., Des Moines Iowa.

10:00. Clinical Signs of Peripheral Nerve Injury—Lewis J. Pollock, M.D., Professor and Chairman of the Division of Neurology and Psychiatry, Northwestern University College of Medicine, Chicago, Illinois.

10:30. (Title not announced)—Walter L. Bierring, M. D., Des Moines, Ia.

11:00. Facts and Fancies on Present Day Organotherapy—A. J. Carlson, M. D., Professor of Physiology Rush Medical College, Chicago, Ill.

AFTERNOON SESSION

2:00. Clinic—Lewis J. Pollock, M. D., Professor and Chairman of the Division of Neurology and Psychiatry, Northwestern University College of Medicine, Chicago, Ill.

3:00. Granuloma Coccidioides with Report of a Case—C. C. Tomlinson, M. D., Assistant Professor of Dermatology and Syphilology, University of Nebraska College of Medicine, Omaha, Nebraska.

Paul Bancroft, Fellow Department of Pathology, University of Nebraska College of Medicine, Omaha, Nebraska.

3:30. Study of a Case of Nephritis—A. D. Dunn, M. D., Director of Department of Experimental Medicine, University of Nebraska College of Medicine, Omaha, Nebr.

4:00. Foreign Bodies in the Esophagus and Respiratory Passages—Bernard M. Kully, M. D., Instructor in Otolaryngology and Anatomy, Creighton University College of Medicine, Omaha, Nebraska.

4:30. Surgical Treatment of Carcinoma of the Breast and Acute Gangrenous Perforated Appendicitis—Illustrated by Motion Pictures—Caryl Potter, M. D., St. Joseph, Mo.

EVENING SESSION

8:15. Title unannounced—W. T. Bovie, M. D., Professor of Biophysics, Harvard University. College of Medicine, Boston, Massachusetts.

9:30. "Tigers"—Lantern Slide Talk on Big Game Hunting in Indo-China and India—Richard L. Sutton, M. D., Professor of Dermatology, University of Kansas College of Medicine, Kansas City, Kansas.

SEPTEMBER 15, 1927

9:00. The Problem of Ureteral Obstruction—Nelse F. Ockerblad, M. D., Associate Professor of Clinical Urology, University of Kansas College of Medicine, Kansas City, Kansas.

9:30. Consideration of Some Border-line Problems in Urology—Herman L. Kretschmer, M. D., Professor of Urology, Rush Medical College, Chicago, Ill.

10:00. The Diagnosis of Modern Treatment of Trigeminal Neuralgia Major—Wm. T. Coughlin, M. D., Professor of Surgery and Director of Department, University of St. Louis, School of Medicine, St. Louis, Mo.

10:30. Etiology and Mechanism and Treatment of Hypertension—Ralph H. Major, M. D., Professor of Medicine, University of Kansas College of Medicine, Kansas City, Kansas.

11:00. (Title written for)—W. T. Bovie, M. D., Professor of Biophysics, Harvard University College of Medicine, Boston, Massachusetts.

AFTERNOON SESSION

2:00. Clinic—Herman L. Kretschmer, M. D., Professor of Urology, Rush Medical College, Chicago, Ill.

3:00. Perverted Physiology as a Factor in Diagnosis of Diseases of the Biliary Tract—C. C. Nesselrode, M. D., Associate Professor of Surgery, University of Kansas College of Medicine, Kansas City, Kansas.

3:30. The Control of Ciliary Activities with Clinical Implication—James F. McDonald, M. D., Professor of Anatomy, Creighton University College of Medicine, Omaha, Nebr.

4:00. Clinic—Wm. T. Coughlin, M. D., Professor of Surgery and Director of Department, University of St. Louis School of Medicine, St. Louis, Mo.

EVENING SESSION

6:30 Dinner—Presidential Address.

SEPTEMBER 16, 1927

9:00. (Title unannounced) — David P. Barr, M. D., Professor of Medicine, Washington University, St. Louis, Mo.

9:30. Practical Application of Forceps, Illustrated on the manikin—F. B. Langdon, M. D., Des Moines, Ia.

10:00. Foreign Protein Treatment in Obstetrics and Gynecology—E. D. Plass, M. D., Professor and Head of Department of Gynecology and Obstetrics, University of Iowa College of Medicine, Iowa City, Ia.

10:30. The Duties of Practitioner in Prevention of Spinal Deformities—Arthur Steindler, M. D., Professor and Head of

Department of Orthopedics, University of Iowa College of Medicine, Iowa City, Ia.

11:00. A Typical Chronic Glomerular Nephritis—Fred A. Smith, M. D., Professor and head of Department of Theory and Practice of Medicine, University of Iowa, College of Medicine, Iowa City, Ia.

———R———

Free Lecture Course in Physiotherapy

A lecture course in x-ray and physiotherapy will be given at Hotel President, Kansas City, Mo., August 27 to September 2. This course is being sponsored by the Rosenthall, Dick, Magnuson and Fisher Companies. Practical instruction will be given by competent physicians and physicists with demonstrations of administrations of all kinds of physiotherapy treatments. There will also be elaborate exhibits of equipment by each of the companies. There will be no charge for this course and all ethical physicians are invited to attend.

———R———

Kansas City Annual Fall Clinical Conference and the Interstate Post-Graduate Medical Association, Kansas City, Oct. 17, 1927, New Shrine Temple, Eleventh and Central Streets.

PRE-ASSEMBLY HOSPITAL CLINICS

Friday and Saturday, October 14th, 15th

INTER-STATE POST GRADUATE ASSEMBLY

Monday to Friday, October 17th to 21st inc.

SCIENTIFIC PROGRAM

Pre-Assembly Clinics at the hospitals of Greater Kansas City upon Friday and Saturday mornings, (October 14th and 15th). Scientific programs and ambulatory clinics each afternoon at Muehlbach Hotel. Dr. J. Shelton Horsley of Richmond, Virginia, is a special guest upon Saturday afternoon (October 15th); Subject: "Peptic Ulcer," Illustrated.

The intensive program of the Inter-State Assembly will begin Monday, October 17th, at 7:00 A. M. and continue morning, afternoon and evening, until the banquet in honor of the distinguished guests upon Friday evening (October 21st).

The guests from Europe are as follows:

Sir John Bland Sutton, England, Surgery.

Dr. R. P. Ranken Lyle, England, Obstetrics-Gynecology.

Dr. Ersilio Ferroni, Italy, Obestetrics-Gynecology.

Prof. Adolphe Maffei, Belgium, Pediatrics.

Mr. Garnett Wright, F. R. C. S., England, Pathology.

Dr. I. Snapper, Holland, Pathology.

Dr. Gustav Alexander, Austria, Otology.

Dr. Otto J. Kaufman, England, Neurology.

Dr. Giuseppe Franchini, Italy.

Dr. Sigmund Frankel, Austria, Obstetrics-Gynecology.

Mr. John S. McArdle, F. R. C. S. Ireland.

Prof. Carl Behr, Germany, Surgery.

Dr. Luigi Mangiagalli, Italy, Obstetrics-Gynecology.

Dr. J. Marinho, Brazil.

Dr. Fritz Steinmann, Switzerland.

Dr. Paul Unna, Germany.

The distinguished guests from America include the following surgeons:

Dr. Charles H. Mayo, Rochester, Minn.
Dr. George S. Crile, Cleveland.
Dr. Alfred W. Adson, Rochester.
Dr. Arthur Dean Bevan, Chicago.
Dr. Jos. Colt Bloodgood, Baltimore.
Dr. Hugh Cabot, Ann Arbor, Mich.
Dr. Walter E. Dandy, Baltimore.
Dr. John B. Deaver, Philadelphia.
Dr. John F. Erdmann, New York.
Dr. E. Starr Judd, Rochester.
Dr. Francis E. Lahey, Boston.
Dr. Dean Lewis, Baltimore.
Dr. Charles H. Frazier, Philadelphia.
Dr. Wm. D. Haggard, Nashville.
Dr. W. E. Lower, ,Cleveland.
Dr. Robt. C. Coffey, Portland, Ore.
Dr. Jabez N. Jackson, Kansas City, Mo.
Dr. George J. Heuer, Cincinnati.
Dr. LeRoy Long, Oklahoma City.
Dr. John J. Moorhead, New York.
Dr. Allen Graham, Cleveland.

The following distinguished internists are to hold clinics or give addresses:

Dr. Lewellys F. Barker, Baltimore.
Dr. Charles A. Elliott, Chicago.
Dr. Elliott P. Joslin, Boston.
Dr. Frederick J. Kalteyer, Philadelphia.
Dr. James H. Means, Boston.
Dr. Leonard G. Rowntree, Rochester, Minn.
Dr. Clarence M. Grigsby, Dallas, Texas.
Dr. Francis M. Pottenger, Monrovia, Calif.
Dr. Francis M. Pottenger, Monrovia,
Dr. David Riesman, Philadelphia.
Dr. John Phillips, Cleveland.
Dr. R. S. Dinsmore, Cleveland.

The specialties are represented by the following distinguished physicians:

Dr. James M. Martin, Dallas, Texas, Roentgenology.

Dr. Alfred S. Warthin, Ann Arbor, Mich. Pathology.

Dr. Gabriel Tucker, Philadelphia, ALR.

Dr. Frank C. Mann, Rochester, Minn., Clinical Pathology.

Dr. Irvin Abell, Louisville, Ky., Obs.-Gyn.

Dr. Nathaniel Allison, Boston, Orthopedic Surgery.

Dr. Alan Brown, Toronto, Canada,, Pediatrics.

Dr. Fielding O. Lewis, Philadalphia, ALR.

Dr. Wm. McKim Marriott, St. Louis, Pediatrics.

Dr. Fritz B. Talbot, Boston, Pediatrics.

Dr. Wm. B. Hendry, Toronto, Canada, Obs.-Gyn.

Dr. Edward A. Strecker, Philadelphia, Neurology-Phychiatry.

Dr. Chas. Herbert Best, Toronto, Canada.

SOCIAL CALENDAR

Friday, October 14th—8 p. m.: Smoker and Get-to-gether (Muehlbach Hotel).

Saturday, October 15th, 7 p. m. Alumni Dinners (Hotels and Clubs).

Sunday, October 16th, 7 p. m. Buffet supper (informal) (Mission Hills Country Club for distinguished guests, sponsors and visitors).

Tuesday, October 18th, 1 p. m.—Luncheon for visiting ladies.

10 p. m.—Formal reception to distinguished foreign guests (Grand Ball Room, Muehlbach Hotel).

Wednesday, October 19th, 1:00 p. m.—Luncheon for ladies at Women's City Club. Dr. Wm. D. Haggard and Dr. Jos. Colt Bloodgood as special guests.

Thursday, October 20th, 2 p. m.—Automobile drive for ladies and distinguished guests—starting at Muehlbach Hotel, Baltimore Avenue.

Friday, October 21st, 7:00 p. m.—Banquet to distinguished Foreign and American guests. Muehlbach Hotel, Grand Ball Room. (Positively limited to 500.)

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An instance of the chemical, dietetic food faddist was illustrated in the '60s by a bunch of Texas steers. A bale of young prairie grass was sent to the food chemist at Washington, D. C., from the prairie state, to learn its food value. Chemical analysis showed that the food value in this young prairie grass was practically nil. A bunch of cadaveric skeleton Texas steers was herded on this young prairie grass in May and by July first had fattened and were marketed. Owing to the slow way of conveying news in those days, the Texas steers did not get word from the chemists at Washington in time to know where they were at.

There is no fault to find with chemistry, but unless eternal vigilance is practiced by the specialist, he will grow a one track mentality.

Recent studies seem to point to the possibility of a true congenital tuberculosis. In 1910, Fontes reported finding certain virulent filtrable elements in the pus from a tuberculous abscess. In 1922 Vandremer found similar elements in a culture of tubercle bacilli. Later experiments have confirmed these findings. Filtrates from tuberculous sputum or pus, contain invisible elements which are virulent and will produce typical tuberculosis, after intravenous injection of the filtrate tubercle bacilli are found in the rabbit's spleen.

FOR SALE: A good practice in Central Kansas in the wheat belt, full equipment, all ready to go to work, reasonably priced for quick sale, 3,000 inhabitants, good opening.

B. E. Pennington, M.D.
Hoisington, Kansas.

For service at our properties, in Peru, South America: Young assistant surgeon with about a year's interneship. Apply by letter. Cerro de Pasco Copper Corporation, Room 1502, 44 Wall Street, New York, N. Y.

FOR SALE—Northeastern Kansas—$3,000 General Practice—large territory, State College close—good crops, low rents, collections good, competition just right, price reasonable—death reason for selling. Box 246, Riley, Kansas.

FOR SALE—Type A-25 new style Morse Wave Generator complete with stand and electrodes for 110 v 60 cyc A C. Hanovia Luxor Lamp complete for 110 v 60 cyc A C Burner. Used only on my crippled boy for six months. As I have my boy in sanitarium I don't need machine. A bargain for some one.

W. A. Jones, Dentist, Lebo, Kansas.

WANTED—Good doctor for a good location. Large territory. Solomon, Kansas. Write Mrs. Nellie Roberts, 202 W. 15th St., Lawrence, Kansas.

FOR SALE NORTHEASTERN KANSAS—$7,000 General Prictice including office equipment and drugs. Also new four room bungalow. Railroad town of 4,500; 50 miles from Topeka, 90 miles from Kansas City; two other doctors; good roads, schools, churches, hospital. An exceptional opportunity for right party. Must deal quickly on account of health. Address J S, care of Journal.

WANTED—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

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The Care of Children in a General Practice

FRANK C. NEFF, M.D., Kansas City

Read at sixty-first annual meeting of the Kansas Medical Society, at Hutchinson, May 3, 4, 5, 1927.

If one glances at the roster of physicians in the directory of the American Medical Association, he will find that the larger cities have nearly all of the specialists in pediatrics. In the small cities there are a few who have indicated that they are especially interested in children's work. In some states, among them Kansas, the treatment of children is almost entirely in the hands of the general physician. At a meeting in Washington, D. C., a few years ago, a speaker estimated that over 50 per cent of the average physician's work is with children. In response to a questionnaire which I sent to 25 general practitioners in this state, the answers indicated that from 11 to 60 per cent (the general average—36 per cent) of practice is pediatric. This is not hard to realize if one includes the newly born, the care of older infants, the infections of the ear, nose and throat, the contagious and respiratory diseases among the pre-school and school ages. The medical schools have recognized this fact by creating a separate department of pediatrics in which the student is given special instruction and clinical experience in this field, as well as in orthopedics which deals largely with the young.

It seems to me in a state medical program that a discussion of these problems in children, which you are so often called upon to meet, might be of interest. In the limited time for this paper I can but mention the common ones. The care of children by the general practitioner consists in the proper feeding of the infants, the direction of the nutrition of children of all ages, the prevention or treatment of communicable diseases and other infections, the timely diagnosis of surgical conditions and the treatment of emergencies.

INFANT FEEDING

There is often a gap in the care of the newly born infant's life during the first weeks when the physician who is especially interested in the well being of the mother may not realize the necessity for watching the progress of his other patient, the baby. I believe that much of the difficulties encountered in handling the feeding of infants during the first year can be prevented by providing proper nourishment from the beginning of life. We take too much for granted if we leave this question entirely to chance, expecting that every mother can entirely and successfully nurse her infant. I could not fail to herein emphasize the importance of breast nursing, but we should go further and watch the infant's welfare from the first and determine whether additional food is needed. As a useful detail in this regard let me suggest that you arrange with some storekeeper in your community to establish a rental department for scales where the family that does not own an accurate pair can rent one for the first three months of the baby's life. By the practice of weighing before and after feeding, the amount obtained by the infant is easily determined, and the quantity though small, should be used, and added to if necessary by sufficient artificial food.

The total amount given at four-hour intervals must be sufficient for comfort, sleep and progressive gaining. Fortunately this is usually obtained from the breast and within ten minutes, never longer than twenty. When it is seen that the mother does not produce enough for the child, there can be no objection but much benefit from following the nursing with enough of a nutritious, easily digested milk formula to make up the needed amount. This will vary with the individual baby, but as a guide one can follow the quantities found by Scammon and Doyle to be the physiological capacity of the infant's stomach.

Amount Taken at One Time by the Average Newly Born Infant

Day	Ounces
1	0.3
2	0.7
3	1.4
4	2.1
5	2.6
6	2.8
7	3.0
8	3.1
9	3.3
10	3.5

Average Amount Taken at Four-Hour Intervals

Age, months	Grams	Ounces
1	110	3.6
2	130	4.3
3	150	5.0
4	170	5.6
5 to 12	180 to 270	6 to 9

The food value of an artificial formula can well be made similar to breast milk so that the nourishment taken by the infant is easily estimated. I believe that you will find it usually advisable to employ sour milk for the additional food given an infant either in the first ten days of life or for several months. There are many good ways to prepare it, and the following formula is only one that may be easily prepared and in proper amounts in the average child will be successfully used:

Boiled whole milk ------ 12 ounces
Soured with a buttermilk tablet or with U. S. P. lactic acid, 2 drops for each ounce.
Water (boiled) --------- 4 ounces
Sugar or syrup --------- 1 ounce

After determining how much breast milk the child gets at each feeding, enough of the formula can be given to insure comfort and a gain of approximately 7 ounces each week. If looseness of the bowels occurs, the artificial food should be omitted for a day, and thereafter used in smaller quantities. Diarrhea in the breast-fed infant may be combated by feeding a few teaspoonsful of skim milk curds suspended in two ounces of water, after each ten minute nursing.

One of the common causes for weaning the young infant is colic. Such a child is apt to be suffering from an increased nervous tone which can be relieved by adequate doses of atropine without stopping the nursing, though it may need to be shortened and some complemental feeding added as mentioned above. A useful and safe method of giving atropine is as follows:

℞ Atropine Sulphate (fresh) -- gr. ½
Water ---------- oz. 1.5
Give one drop before the first feeding and increase a drop each feeding until the child becomes comfortable, and then continue the dose at that level, whether it is two or twelve drops.

Another practice of changing the infant's food is found when a gastro-intestinal disturbance with vomiting and diarrhea suddenly occurs in an infant who may have been doing well. This may be due to hot weather, too many clothes or too close housing. It often happens that an infection has developed as the cause of the digestive disturbance. This may be an acute rhinitis, sinusitis, otitis media or bronchitis, which should be treated, and a temporary reduction made in the amount of food. In breast babies such an infection does not seriously upset the digestion.

THE NUTRITION OF CHILDREN OF ALL AGES

There is no reason why the physician should not make it a part of his practice to weigh and measure the children of his clientele at least once a year, examine their urine and suggest methods for correcting improper habits of eating, bedwetting, constipation and sleeping. In this way undernutrition may be prevented or corrected, disease such as diabetes, pyelitis and vulvovaginitis detected.

COMMUNICABLE DISEASES

I would urge the physician to educate his patients to have the infant vaccinated against smallpox at three months of age, to administer toxin-anti-toxin to all infants at nine months of age. All cases of membrane in the nose or pharynx and of diphtheritic croup should early be given diphtheria anti-toxin, as this will prevent disasters. The family should be instructed as to the harmlessness of measles under nine months, a time of life where it is well for the child to have the disease and the great danger from measles after that age. Even the youngest infant is susceptible to pertussis and the younger the child the more serious the course, so that the family should always guard against exposure. The great difficulty in prevention of contagion is in the school child, who usually is the source of spread to the younger members of the family. Although vaccine is as yet not universally accepted as a prophylactic for whooping cough, recent Italian reports are much more encouraging. It should be best given before the exposure has taken place. In the treatment of severe pertussis vaccine should be used though one cannot promise much in the individual case.

There has been wide interest in the question of scarlet fever immunization. The success of toxin-anti-toxin for diphtheria has created a demand on the part of the profession and the laity for specific prevention and treatment. The methods of active immunization are still in the stages of refinement and, to some extent, their results are still in doubt. The Dick test is difficult of interpretation, and what it means for definite conclusions as to constant and per-

manent immunity cannot as yet be stated, as sufficient time and experience have not elapsed for proof. When scarlet fever is present in the community, I believe that although the merits are not entirely proven, one or two injections of the Larson recinoleated scarlet fever solution should be given to those children who are apt to be exposed. It will not stop the disease which is alrealy in the incubation period. An objection to the use of the scarlet fever antitoxin serum is that it does not always prevent the disease in the child who has been exposed. Another objection is that serum is unnecessary in children who are naturally immune, especially in infants under twelve months, or in the child who is susceptible but, as is often found, does not develop the disease from some one individual exposure. A high percentage of annoying serum sickness results from the use of this horse serum, and I have come to forego its injection except in the case of actual severe scarlet fever.

Children above nine years of age and any child who may be exposed to contaminated food or water should be given as a routine typhoid vaccine every three years.

As a preventive for dysenteric disease in young children who are not being breast fed, dried milk should be used during the summer and fall months, and all fresh milk and water should be boiled at any time of year. Individuals who have recently had the disease should be suspicioned of being carriers.

The danger from tuberculosis is a real one. Infants are highly susceptible to meningitis, older children to glandular and abdominal tuberculosis. Contact with open cases and infected milk are to be avoided in every way that you can direct.

THE TREATMENT OF OTHER INFECTIONS

The prevention of exposures to epidemic colds is the most useful sort of treatment. In addition to this, the physician should caution against the overheated and superdried air of the living rooms, the failure to provide outdoor air and ventilation. It is probable that the best treatment for any acute upper respiratory infection is to put the child in bed for a few days in a well ventilated room.

Persistent fever in children is often due to rhinitis, sinusitis, otitis media, mastoiditis and lymphadenitis either of the cervical or peribronchial glands. These call for such local treatment as is effective, for drainage of actual pus, and for improvement in the hygiene and environment of the child.

In the newly born infant and in older girls obscure fever may be due to infection of the urinary tract. Examination of the urine in every case, and the administration of plenty of water and alkalies throughout the twenty-four hours are to be urged.

Erysipelas in the infant is benefited by repeated blood transfusions.

Serious febrile conditions accompanied by vomiting and loss of body fluids can be greatly benefited by the daily subcutaneous injection of normal salt solution.

Physicians should have an open mind about the possibility of intestinal parasites and the occasional harmfulness of infection in the child.

SURGICAL INTERVENTION

Tongue-tie should be let alone, because of the untoward hemorrhage which may follow an operation and prove fatal.

Harelip should be at once repaired. Cleft-palate may be left until the child is in the best condition, often not until one year or more of age. The physician should see that the child is nourished by any adequate means. These children lose much of their feedings, are deprived of breast milk, and nearly all become anemic and underfed. Feeding with a spoon or tube is advisable, and the formula should be concentrated.

The tonsil and adenoid problem is a large one and should be carefully considered. Interference with breathing, repeated attacks of acute inflammation, recurrent colds and hyperplasia of the cervical glands call for removal of the tonsils and adenoids.

Acute vomiting should receive prompt consideration. In the infant usually under eight weeks of age, it may be due to pyloric stenosis, the best treatment for which is careful surgery. Acute vomiting and bloody stools in any infant suggest intussusception and operation should not be delayed for twenty--four hours. Appendicitis is rare under two years of age, but becomes increasingly frequent each year thereafter. The child should be at once taken to a hospital and operation be promptly done after an early diagnosis.

SUMMARY

To the general practitioner will be brought the majority of the children in any community. Since these furnish such a high percentage of general practice, the doctor should give especial attention to the health and to the prevention and cure of disease among these young patients.

The Use of Iodized Oil in the Visualization of the Bronchial Tree

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Read at sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3, 4, 5, 1927.

Included in the experience of all of us, who study the intestinal tract by x-ray, are the incidents when the opaque media has been observed to enter the tracheobronchial tract, by reason of a fistulous opening, paralysis of the deglutitory apparatus, or other cause. We have been impressed by the lack of pulmonary reaction in such cases. The suggestion then of the intentional introduction of some contrast media into the respiratory tract, for the purpose of rendering it radiographically visible, has been more or less tolerantly received.

Jackson[1] of Philadelphia in 1922 introduced finely powdered bismuth subcarbonate through a bronchoscope. The bronchograph obtained by routine x-ray film of the chest after such insufflation clearly delineated the trachea and bronchi in the region studied, and was, therefore, the source of considerable information, as to the bronchial caliber, cavities, etc. The method, however, failed to become popular with the exception of comparatively small numbers of workers, for the reason that only the larger bronchi or localized areas as a rule were shown, and especially because of the high degree of skill necessary in following the technique for the introduction of the powder.

Sicard and Forestier[2] in March, 1922, suggested in their article "General Method of Roentgenologic Exploration with Iodized Oil," the use of a forty per cent iodized oil called Lipiodol, in the study of the bronchial cavities. Their original researches with the oil were in the epidural and subarachnoid spaces. A later communication of April, 1926, includes the statement that the examination of the pulmonary system, by means of intratracheal or intrabron-



Fig. I. Normal distribution Iodized oil forty per cent in essenitally normal chests.

chial injections of Lipiodol, is without doubt the application which has yielded the most important results.

The word Lipiodol is a trade name. The oil is formed by the chemical combination of the oil of poppy with forty percent pure iodine. The chemical combination is quite firm, to the end that the iodine reaction is not obtained by the usual methods. For this reason, the antiseptic value of the oil is negligible. The iodine content, of course, is the explanation for the radiographic shadows produced. The oil was originally introduced in France twenty-five years ago by L. Lafay by intramuscular or a subcutaneous injection. In cases where a moderate but prolonged iodine treatment was indicated, radiographs made of the part

which had received the injection showed dense shadows, and the fact that the material was ideally tolerated by the tissues remaining unabsorbed for a long period of time suggested to Sicard and Forestier its use in general cavity examination. An American product called Iodipin also consisting of a forty per cent iodine in a vegetable oil is on the market. It is approximately the same price as the French product, and limited reports would indicate that it is the equal of Lipiodol.

The manner of introduction of the oil into the respiratory tract has been the subject of rather voluminous discussion in the



Fig. II. Usual Radiograph and same after injection with Lipiodol. Classical clubbed type bronchiectasis. Bilateral. See also Fig III.

recent literature. Dr. Singer and Goldman[4] of St. Louis, Missouri, to whom I am personally indebted for my interest in this method of examination have classified the methods of introducing the oil under six heads.

1. Through a trocar needle resembling a tracheotomy tube into the trachea under sterile precautions. The method of Armand-Delille.[5]

2. Under direct laryngoscopic examination, with the patient lying on the back and with the head extended over the table.

3. Through the bronchoscope introduced diretly into the lung.

4. Through a tracheal catheter introduced under direct illumination of the larynx.

5. Injection into the pharynx without local anesthetic, while the patient pulls out his tongue as far as possible.

6. Introduction of the oil through an intubation tube as suggested by Iglauer.[6]

The fifth method is originated by Dr. Singer and is the method, with more or less trivial changes, which I choose to employ. It is applicable to all except young children, who will require the first method. Occasionally, an adult requires the fourth method, but where co-operation is possible and can be obtained, no anesthesia is required.

Of the other methods, each will be found useful in specified cases. Where a bronchoscopic examination is required for some other reason, the oil may be directly instilled. Obviously the method chosen will depend on the man who is to do the work.

As to the interpretation of the radiograph made after the injection of iodized oil, several factors are to be taken into account as altering or modifying the shadows cast. A large amount of oil is expelled by coughing in a short time after the injection. The radiograph must, therefore, be made immediately. In case it is not, the fact must be borne in mind.

A portion of the oil will usually remain for days and even months, and a re-examin-

ation with the oil must take this fact into account. The oil from the previous examination will be found deep in the lung parenchyma, coating the alveoli.

The position of the patient determines the site to which the oil will gravitate. If the patient has assumed an upright position, leaning forward or backward, the anterior or posterior group of bronchi will receive a larger or smaller portion of oil as the case may be. Lateral projections will reveal this fact.

It is possible to change the position of the oil after injection by positioning the patient. A modified or speciialized Trendelenburg position after injection in an upright position permits the oil to flow from the lower to the upper lobes.

The bronchial tree in addition to its classical function acts as a support to the parenchyma structures. The smaller bronchi in contrast to the larger contain no cartilage, and, therefore, are supported by the larger.

Ballon and Ballon[7] have shown that the position of the larger bronchi are fairly constant in man, and quote Ewart as having proved by calculation that the lungs of infants contain the same elements as those of the adult, their size only being different; consequently, the normal bronchial tree as visualized by the pneumograph at various age periods is constant.

The size of the products of a bifurcation of a bronchus is equal to that of the parent. It is almost an invariable rule to quote the same author; that of two diverging bronchi, the smaller one diverges most from the position of the parent tube. The position of the bifurcation of the trachea shows a variation as to the site even in the normal subject. The left bronchus is more oblique and smaller than the right, which is short and wide and passes down as a direct continuation of the trachea.

Diseases of the bronchial tree, which may be demonstrated by the injection of iodized oil, obviously are those which affect the lumen; by obstruction, stenosis or dilatation, position, course, and relationship. In addition bronchography finds especial application in the study of the post cardiac region, chronic empyema, broncho-pulmonary fistula, lung abscess and following thorocoplasty, etc.

Bronchiectasis, the pathological dilatation of the bronchi, may be localized or diffuse, unilateral, or bilateral. In type, saccular, cylindrical and fusiform forms are recognized. It is generally agreed that the disease has gone unrecognized until the clinical signs of excess sputum, persistent

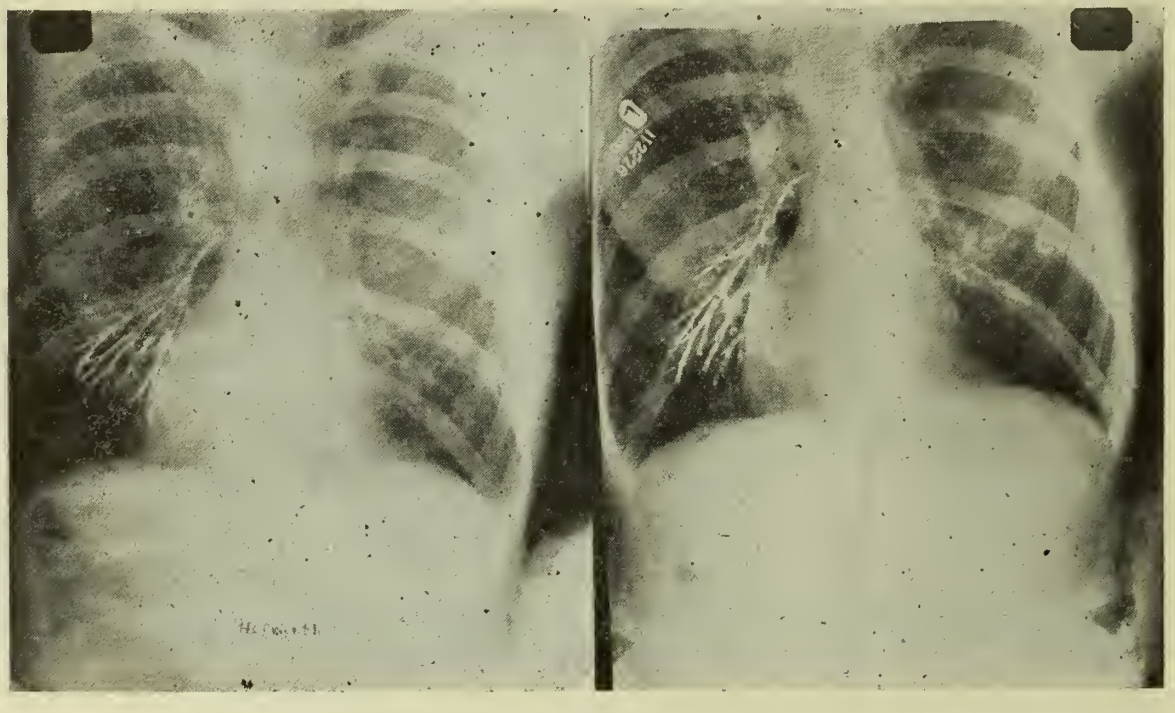


Fig. III. Injection left bronchii. Same case as Fig. II. The injections were made thirty days apart by fourth method. Note identical shadows.

rales and typical cough denoted an advanced pathology. By radiographic study with iodized oil, the diagnosis is much more exact, the site and extent evaluated and will certainly contribute to earlier diagnoses.

Ballon and Ballon have classified bronchiectasis into five types based on the injection of iodized oil: 1, Cylindric; 2, Grape; 3, Bead; 4, Clubbing; 5, Sacular. These types denote the stage of the disease as well as description of the condition of the air tube and distal lung parenchyma. It is obvious that any such classification may be theoretically possible by any method chosen. Acute infections such as early cold or influenza, advanced circulatory complications, recent hemoptysis or enfeebled conditions from any cause, wherein the manipulation incident to the procedure would be contra-indicated, deny the use of the method. Some loss in vital capacity will occur by displacement of the oil.

In defense of the method, because of the newness, Pirie[9] reports twenty-seven cases with one reaction; that an advanced bilateral tuberculosis, whom he says was inadvisedly subjected to injection. The patient

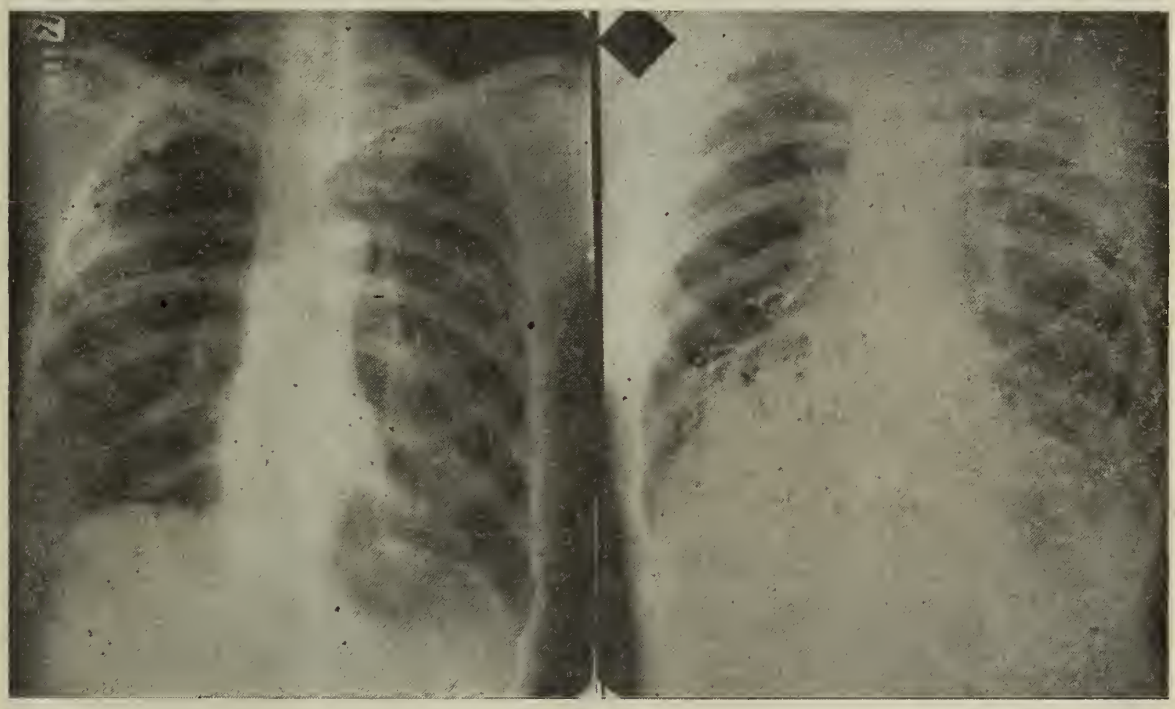


Fig. IV. Old pulmonary tuberculosis. Diffuse mixed types bronchiectasis. Injection left chest. Injection left chest three weeks previously. Note residue.

used only as a gross guide, that the types will overlap.

Iodized oil has done much and may reasonably be expected to do more in the study of non-tuberculous pulmonary disease. One sees in the literature the repeated suggestion of the abandonment of the term chronic bronchitis as a primary diagnosis.

As to the contra-indications for the use of iodized oil, all have agreed that the method should not take precedence over other established and valuable procedures of investigation. Archibald[8] concludes that iodized oil should be used with caution in tuberculous cases, and that the bronchoscopic method is especially unfitted. Some danger of infectious tarnsfer is at least

died of acute cardiac dilatation during the procedure. Ballon reports one hundred cases with no bad results. Stewart of Ninette, Manitoba, thirty cases without unfavorable reaction. Dr. Singer says no deaths or serious reactions have been reported in France, England and Germany during three years of its use; and, personally, has seen no serious result in his own series. Lawson reports no reaction in his series of cases, wherein he carried out a study of empyema cavities.

Pritchard, Whyte and Gordon, in an article appearing in the January issue of Radiology, reported one thousand cases, six of whom developed mild iodism in the form of an irritable rash. For this reason, they

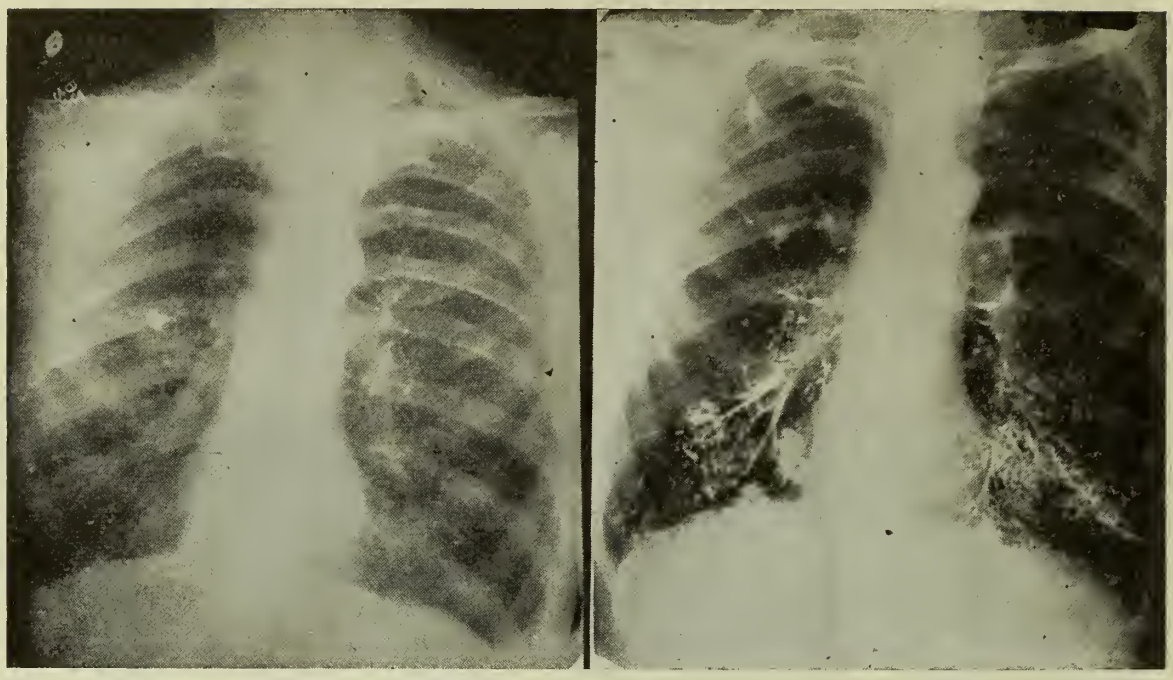


Fig. V. Injection both lower bronchii with twenty c.c. Lipiodol. Shows grape bronchiectasis right lower, cylindric type proximal

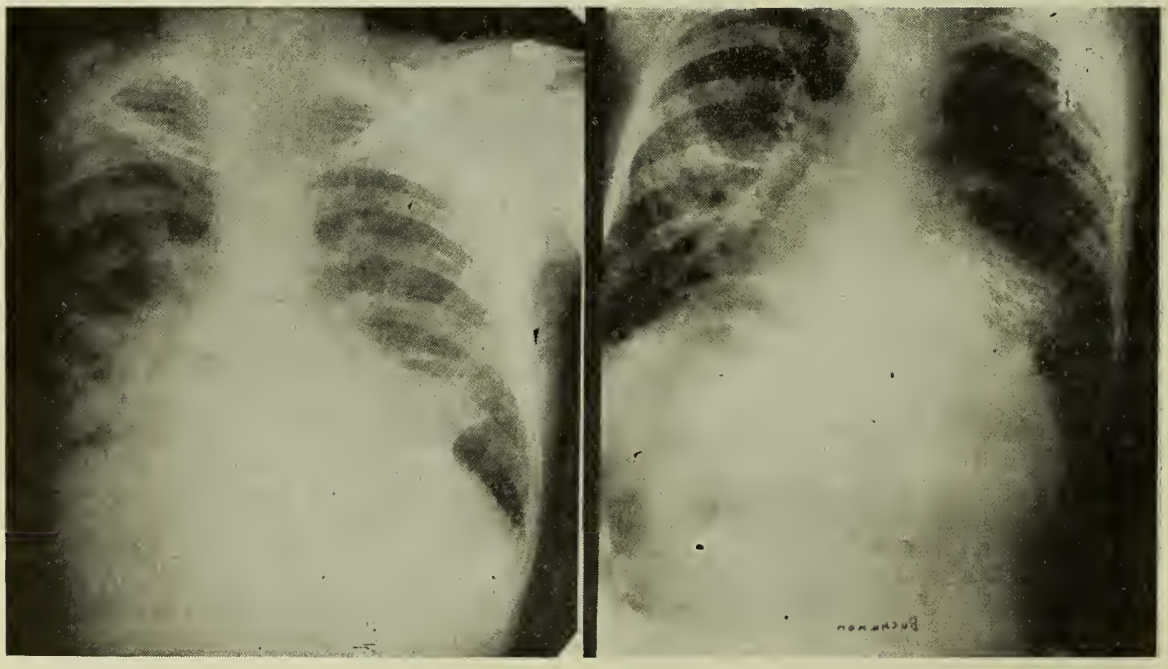


Fig. VI. Pericarditis Sicca and Marked Cariopulmonary Fibrosis. Note proximity of primary bronchii and their normal calibre. Post mortem confirmation.

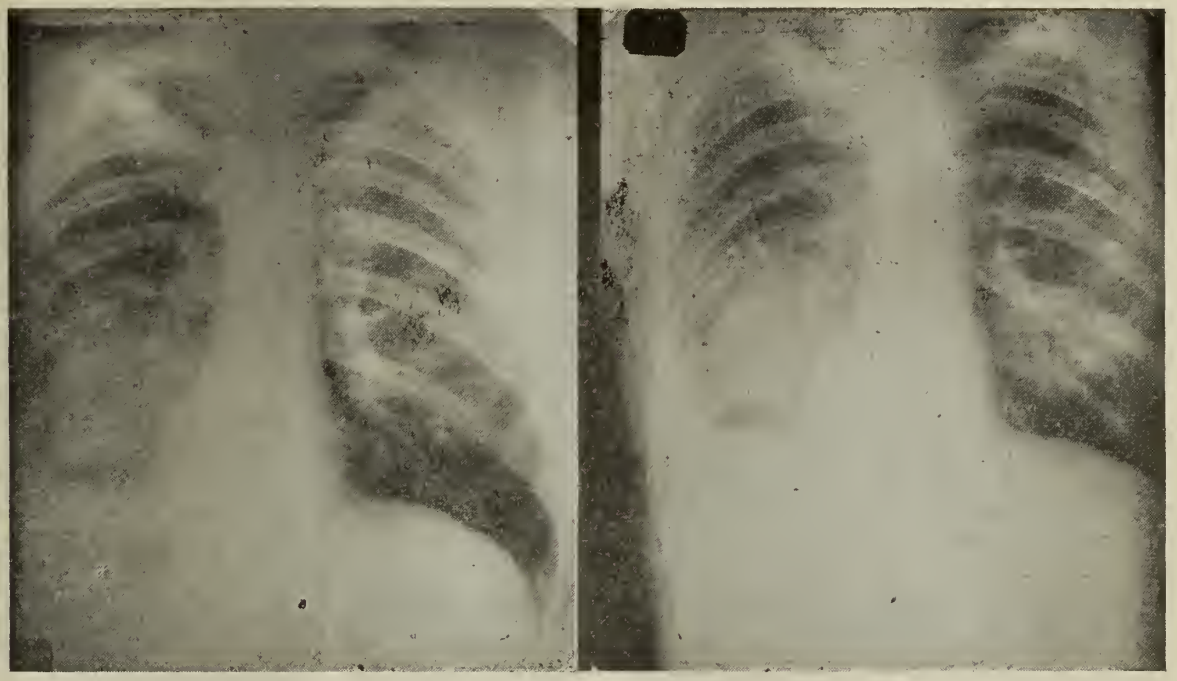
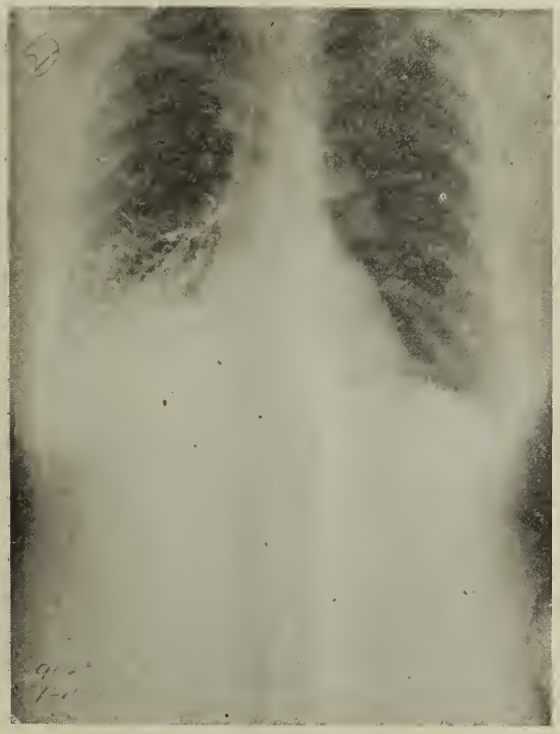


Fig VII. Lung abscess without fistula.

administer castor oil in those cases where a considerable amount of the oil is swallowed, for the purpose of expelling the oil before the possibility of a split in the compound by reason of contact with the alkaline intestinal juices.

In my own experience (twenty-two cases, twenty-eight injections) no unfavorable reaction was seen. On the contrary, several patients with actual bronchiectatic changes requested reinjection as a therapeutic measure, reporting diminution in cough, loss of the tenacious character of the sputum, and partial to complete relief of chest discomfort or pain.



An article by Archibald and Brown, J. A. M. A., April 23, 1927, includes a complete bibliography of the literature to date and they conclude that definite potential dangers accompany the intratracheal injection of iodized oil which denies its indiscriminate use.

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William Beaumont, the Father of American Physiology

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William Hunter, the talented and brilliant physician of the eighteenth century, brother of the immortal John, when lecturing to some students one day made the following pithy and oft quoted remark: "Some physiologists will have it that the stomach is a mill, others, that it is a fermenting vat, others again that it is a stew-pan; but in my view of the matter, it is neither a mill, a fermenting vat nor a stewpan; but a stomach, gentlemen, a stomach."

It is the purpose of this sketch to discuss in the briefest possible fashion, to give in the barest outline, the life and labors of the pioneer American physiologist, William Beaumont, the man who proved conclusively that the stomach "is neither a mill, a fermenting vat nor a stew-pan! but a stomach, gentlemen, a stomach."

On a lovely day in 1822, on the island of Michili, Macinac, in the far off northern wilds, where the waters of Lake Michigan and Lake Huron unite, an interesting and animated scene was taking place. The annual return tide to the trading post was in full swing, and a noisy and excited crowd of Indians, French Canadian voyageurs and soldiers were gathered about the palisades and block houses of the old fort. The beach was thronged with canoes and bateaux laden with the pelts of the winter's catch, and groups of interested onlookers were discussing the profits that old John Jacob Astor would make on furs, while others perhaps of political bent were wondering whether James Monroe would run for a third term as President, or whether an old fire-eater from Tennessee named Andrew Jackson would be a candidate.

Suddenly from the company's store there was a loud report of a shot-gun, there was instantly tremendous excitement, the scurrying of many feet, wild rumors of a shooting scrape and messengers went hurrying to the fort in search of a doctor. In a few minutes an alert, straight young man in the uniform of an U. S. Army surgeon made his way through the excited crowd and was at the side of a young French-Canadian voyageur who had been wounded by the accidental discharge of a gun. Surgeon Beaumont, although a young man, had seen much service and at the capture of York and at the investment of Plattsburgh, had shown a coolness and bravery under fire that had won recognition from his superior officers.

Mr. Hubbard, one of the officers of the fur company, gave the following account of the accident:

"On the morning of June 6, a young French-Canadian, Alexis St. Martin, was standing in front of the company's store, where one of the party was holding a shotgun, which was accidently discharged, the whole charge entering St. Martin's body. The muzzle was not over three feet from him—I think not more than two. The wadding entered, as well as pieces of his clothing; his shirt took fire; he fell as we supposed, dead.

"Doctor Beaumont, the surgeon of the fort, was immediately sent for and reached the wounded man in a very short time; probably three minutes. We had just gotten him on a cot and were taking off some of his clothing. After the doctor had extracted part of the shot, together with pieces of clothing, and dressed his wound carefully, he left him, remarking: 'The man cannot live thirty-six hours; I will come and see him by and by.' In two or three hours he visited him again, expressing surprise at finding him doing better than he had anticipated. The next day, after getting out more shot and clothing and cutting off the ragged edges of the wound, he informed Mr. Stuart in my presence that he thought he would recover."

This prediction, as we know, proved true. Alexis St. Martin, a lad of 19 at the time of this accident, died at the ripe old age of 83.

Beaumont's own description of the wound was given in his "Memorial" to the Senate and House of Representatives.

"The wound was received just under the left breast, and supposed, at the time, to have been mortal. A large portion of the side was blown off, the ribs fractured and openings made into the cavities of the chest and abdomen, through which protruded portions of the lungs and stomach, much lacerated and burnt, exhibiting altogether an appalling and hopeless case. The diaphragm was lacerated and a perforation made directly into the cavity of the stomach, through which food was escaping at the time your memorialist was called to his relief. His life what at first wholly despaired of, but he very unexpectedly survived the immediate effects of the wound, and necessarily continued a long time under the constant professional care and treatment of your memorialist, and, by the blessing of God, finally recovered his health and strength.

"At the end of about ten months the

wound was partially healed, but he was still an object altogether miserable and helpless. In this situation he was declared 'a common pauper' by the civil authorities of the county, and it was resolved by them that they were not able, nor required, to provide for or support, and finally declined taking care of him, and in pursuance of what they probably believed to be their public duty, authorized by the laws of the territory, were about to transport him, in this condition, to the place of his nativity in lower Canada, a distance of more than fifteen hundred miles.

"Believing the life of St. Martin must inevitably be sacrificed if such attempt to remove him should be carried into execution at that time, your memorialist, after earnest, repeated, but unavailing remonstrances against such a course of proceedings, resolved, as the only way to rescue St. Martin from impending misery and death, to arrest the process of transportation and prevent the consequent suffering, by taking him into his own private family, where all the care and attention were bestowed that his condition required.

"St. Martin was, at that time, as before intimated, altogether helpless and suffering under the debilitating effects of his wounds—naked and destitute of everything. In this situation, your memorialist received, kept, nursed, medically and surgically treated and sustained him, at much inconvenience and expense, for nearly two years, dressing his wounds doily, and for considerable part of the time, twice a day, nursed him, fed him, clothed him, lodged him and furnished him with such necessities and comforts as his condition and suffering required.

"At the end of these two years he had become able to walk and help himself a little, though unable to provide for his own necessities. In this situation your memorialist retained St. Martin in his family for the special purpose of making physiological experiments."

The accident which happened to Alexis St. Martin gave Beaumont his opportunity. It was of course an accident and if the shotgun had not been discharged on that June day at Michili Macinac, Beaumont would perhaps have never been known to posterity. But it has been pointed out that mere chance or accident when it comes to a man with an alert, well--trained mind, gifted with imagination, may become a great opportunity. The discovery of the x-ray was in a sense quite accidental, but the well-trained mind of Roentgen immediately grasped its importance and possibilities for study and development. Many of Pasteur's great discoveries were accidental in a sense, but back of them all were years of work and hard study, preparing a mind to grasp the importance and see the implications of chance observations.

It may be of interest to trace the early life of Beaumont to see what qualities of mind or early training, prepared him to grasp this opportunity that made him the first great American physiologist.

William Beaumont was born Nov.21,1785, a few years after the close of the Revolutionary War, in Lebanon, Conn. Very little record is preserved of his early life, except the fact that his father was a staunch Democrat of the old Jeffersonian school and that the son early showed great interest in National affairs.

In 1806 young William Beaumont, then 21 years of age, becoming restless and desiring to see more of the world, decided to leave his father's roof and go forth to seek his fortune. Setting out with a horse and cutter, a barrel of cider and one hundred dollare in cash, he started northward, in mid-winter, without any particular destination and finally arrived the following spring at the little village of Champlain, New York, near the Canadian border. This small town beautifully situated, had winters very long and severe which according to a contemporary "had a very salutary effect on the morals and industry of the place, the rigors leaving little time for the lassitude of idleness or dissipation, a circumstance friendly to moral virtues and to vigor of the body and mind."

Beaumont was favorably impressed with the place and located here. He had been educated in the public schools of Connecticut which were then considered the fountain-heads of common school learning, so that when he applied for a position of village schoolmaster, he received the appointment. He taught school for three years and during this time decided to study medicine and spent his leisure moments reading such medical works as he could secure.

In 1810 he crossed Lake Champlain to St. Albans, Vermont, where he applied to Dr. Benjamin Chandler and was taken into Chandler's home as an apprentice and student of medicine. Dr. Chandler left an indelible impress upon young Beaumont's mind and instilled into his young pupil the importance of developing his memory, his powers of observation and the habit of log-

ical thought. He remained with his preceptor for two years preparing powders, making pills, sweeping the office and assisting at operations. He rode about with Dr. Chandler from house to house, jotting down in his note-book the words of wisdom that fell from his master's lipe.

This note-book has been preserved and gives us an insight into the inner workings of Beaumont's mind. Two outstanding features are the excellent and minute case records of all patients he saw and his great interests in autopsies, which he was always eager to secure and which were always performed with exceeding care and scrupulous attention to every detail. This note-book demonstrates conclusively that the power of keen observation and the true scientific spirit were obvious at an early age of his career.

With the completion of his apprenticeship the medical society of Vermont granted him a license to practice, this document bearing the date of "the 2nd Tuesday of June, A.D. 1812." In this same month war was declared against England and in September 1812, Beaumont joined the American Army as surgeon's mate.

Beamuont's career in the army during the war of 1812 is graphically described in his diary, which has been preserved. He saw a most active and strenous service but found time to write down many interesting medical observations and to try out original forms of treatment. He saw much diarrhoea and fever, probably typhoid, and some of his observations on what was probably the latter, are of great interest. On Dec. 12, 1812, he writes in his diary: "Ascertained the treatment of the Surgeon of the 11th Regt. in this camp, in diseases now prevailing, which is to give from one to three Emetics and as many cathartics, in order, he says, to cleanse the prima viae and obviate the symptoms of a bilious diarrhoea, and then give tonics. Behold the gasping, gasping Mortals, how they die! From two to five in a day! Twenty-six in the course of two weeks out of four hundred. Can it be correct practice, when in the next Regt., out of six hundred, in an exactly similar situation and laboring under the same diseases, not one has died in the same time under a diametrically opposite practice? No!"

In 1815 Beaumont resigned from the army and practiced for a time at Plattsburgh, but in 1820 he was again commissioned in the army and was immediately ordered to Fort Macinac. Two years later as already described, chance threw Alexis St. Martin across his path.

In 1825 Beamont made the following notes about St. Martin. "When he lies on the opposite side, I can look directly into the cavity of the stomach and almost see the process of digestion. I can pour in water with a funnel, or put in food with a spoon, and draw them out again with a syphon. I have frequently suspended flesh and other substances into the perforations to ascertain the length of time required to digest each.

"This case affords an excellent opportunity for experimenting upon the gastric fluids and process of digestion. It would give no pain, nor cause the least uneasiness to extract a gill of fluid every two or three days, for it frequently flows out spontaneously in considerable quantities. Various kinds of digestible substances might be introduced into the stomach, and then easily examined during the whole process of digestion."

Beaumont carried these ideas into execution and in May, 1825, began his experiments. In June he was ordered to Fort Niagara, taking St. Martin with him and continuing his experiments. A few months later he took him to Burlington and Plattsburgh. From the latter place St. Martin took an unceremonious departure and returned to Canada, where he married and had two children. Four years later Beaumont again saw St. Martin and continued his observations for two years, at the end of which Alexis again returned to Canada. Three years later, in 1832, St. Martin again engaged himself to submit to a series of experiments and in 1833 was enrolled in the United States army as Sergeant Alexis St. Martin. Beaumont's last recorded experiment was in Nov. 1833.

The experiments which Beaumont performed were published from time to time and excited world-wide interest and comment. Among the leading scientists of the time Prof. Dunglison of the University of Virginia, Benjamin Silliman of Yale, Berzelius of Sweden and Claude Bernard may be mentioned among those interested in his work and with whom he corresponded. Nor was interest in his work confined to scientific men. Many prominent public men such as Senator Thomas H. Benton, Lewis Cass, Edward Everett and Robert E. Lee were interested in his labors as their letters to him show.

The most important results of Beaumont's observations have been summed up as follows by Osler.

First: his clear description of the appearaance and properties of the gastric juice.

Secondly: the proof that the important acid in the gastric juice is hydrochloric acid.

Thirdly: the recognition that gastric juice and mucus are separate secretions.

Fourthly: the profound influence of mental disturbances on the secretion of the gastric juice. This observation antedates by many years that later researches of Pawlow, so well known to all students of medicine.

Fifthly: a more accurate and comprehensive comparison of digestion in the stomach with that outside the body.

Sixthly: the proof that water leaves the stomach rapidly.

Seventhly: the first study of the motions of the stomach.

And lastly: a study of the digestibility of different articles of diet in the stomach which still remains one of the greatest contributions to the subject of dietetics.

With the departure of "that old fistulous Alexis" as Beaumont called him, the physiological experiments came to an abrupt end. For several years Beaumont made unsuccessful attempts to induce Alexis to again submit to more experiments, and finally lost hope.

During most of the time the experiments were carried out, Beaumont took care of St. Martin, fed him and clothed him and part of the time paid him a salary, although his own salary as assistant surgeon was only forty dollars a month and he had a family to support. In 1834 a memorial was presented to Congress asking that Beaumont be reimbursed for his expenditures. It was defeated, however, by a vote of 129 to 56, because probably, as stated at the time, there was a "theoretical objection to the appropriation by Congress of money for any scientific or philanthropic purposes whatever."

In 1835 he was assigned to a permanent army post at St. Louis and soon had a very large and lucrative practice. Five years later after having a disagreement with the Surgeon General, Beaumont expressed himself regarding (to quote his own words) "the absurd opinion, contracted views, narrow-minded, vindictive spirit and petty tyrannical disposition" of the "weak, waspish and willful head of the Medical Department," and as a result, Beaumont's military career came to an abrupt termination.

His practice continued to grow after he left the Army and in 1841 he wrote his cousin he declined "more practice daily than half the doctors in the city get in a week." He still retained his interest in St. Martin and in 1852 almost succeeded in getting him to come to St. Louis.

Beaumont's later years, as he described them, were in "peaceful quiet ease and competence, satisfied with ourselves, our children and friends, caring little for the formalities, follies and fashions of the present age, the bustling turmoils, vain shows, pride and pageantry of modern Society."

Beaumont died on April 25, 1853, from an infected carbuncle. He is buried in the Bellefontaine Cemetery in St. Louis. Few pilgrimages are made to his grave, and his last resting place is unknown to most of the world, which he served so well by his life and labors.

Beaumont was a very unique and unusual person. Before St. Martin's accident at least twelve examples of this condition were reported in medical literature, but none of thm carefully studied. Beaumont turned an accident into an opportunity.

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Preparation, Testing, Storage and Use of Biological Products

JOHN F. ANDERSON, M.D.*
New Brunswick, N. J.

Abstract of Address delivered before the Kansas School for Health Officers and Nurses, April 11th, 1927.

Biological products are those preparations prepared from living organisms, and used for the prevention and treatment of diseases. These preparations may be either living organisms, dead organisms, body fluids, toxin products resulting from the growth of bacteria or a combination of the latter two.

These different forms may be illustrated by mentioning smallpox vaccine which is a living organism, typhoid vaccine prepared from killed typhoid bacilli; diphtheria anti-toxin from the blood serum of immunized animals; scarlet fever toxin resulting from the growth of scarlet fever streptococci, and diphtheria toxin-anti-toxin made from a mixture of diphtheria toxin and anti-toxin.

The first biologic product used in human medicine was vaccine virus discovered by Jenner more than 125 years ago. It is not possible to even approximate the number of lives saved in the 125 years of its use by the protection it has given against small-

*Direector Biological Laboratories, E. R. Squibb & Sons.

pox. In considering the value of vaccination, it must ever be kept in mind that revaccination is just as important as the first vaccination, as the immunity given by vaccination gradually disappears in some individuals after 7 to 10 years. A child vaccinated in infancy should again be vaccinated when 7 to 10 years old.

Vaccine virus is prepared by vaccinating healthy calves, and collecting the "pulp" as it is called, grinding this with glycerine to a fine suspension or emulsion. It is tested to insure its freedom from harmful bacteria and their toxins and stored at low temperatures (about 15°F) until ready for shipment.

Diphtheria Anti-toxin was the first biologic product used for the treatment of disease, and its method of preparation is entirely different from that used for vaccine virus.

Diphtheria Anti-toxin is made from the blood serum of horses which have been immunized by repeated injections of diphtheria toxin. The horse is bled, the serum separated from the blood cells, and concentrated to reduce its volume and increase its potency per c.c. It is then made sterile by filtration through a Berkefeld Filter and tested on guinea pigs for the number of units per c.c. It is then stored at low temperature for a time and finally filled into the syringes with which all are familiar. The potency of Diphtheria Anti-toxin is meaured in units per c.c. and it is usually dispensed in syringes, ready for administration, containing from 1000 units to 20,000 units in a single syringe. 1000 units is the usual dose for prophylactic purposes, while the average therapeutic dose is 10,000 units; but in severe cases this may be double, or more than this. It is impossible to estimate the number of lives saved by the timely administration of Diphtheria Anti-toxin; but we are safe in estimating that the mortality has been reduced not less than 50% under average conditions, and under favorable conditions an even greater reduction has been observed.

Tetanus Antitoxin, which was used so extensively during the great war for the prevention of lockjaw and the administration of which has become almost routine in all infected wounds, is prepared very similarly to the method used for the preparation of Diphtheria Antitoxin—the essential difference being that whereas in the case of Diphtheria Antitoxin the horses are immunized with injections of Diphtheria Toxin, in the case of Tetanus Antitoxin, tetanus toxin is used for the immunization of horses. The serum is collected and concentrated in the same way as in the case of Diphtheria Antitoxin. The average dose of Tetanus Antitoxin for prophylactic purposes is 1500 units, which should be given immediately following the occurrence of any infected wound, particularly if the wound is deep or punctured, or there has been bruising or soiling of the tissues. The tetanus germ is so widely distributed in nature that Tetanus Antitoxin should be administered to avoid the development of lockjaw following even very simple wounds. Tetanus Antitoxin is also used for the treatment of tetanus or lockjaw, and in this condition the antitoxin, instead of being administered subcutaneously, is administered intraspinally as well as intramuscularly, and very large doses are sometimes required.

Scarlet Fever Antitoxin is prepared by the immunization of horses with Scarlet Fever Toxin produced by growing the streptococci specific to scarlet fever in beef broth. It requires a longer period of treatment to satisfactorily immunize horses for the production of Scarlet Fever Antitoxin than it does to make either Diphtheria or Tetanus Antitoxin. The antitoxin is prepared in identically the same way as in the case of the other two antitoxins; but the testing is done entirely upon human beings. With the possible exception of certain species of goat, no animal has been found to give a satisfactory skin test reaction to Scarlet Fever Toxin, and therefore human beings are the only means we have, up to this time, for determining the strength of Scarlet Fever Antitoxin. This is done by mixing varying amounts of the antitoxin to be tested with a definite number of skin test doses of the standard toxin distributed by the Hygienic Laboratory, and injecting .1 cc of this mixture intradermally in the skin of individuals susceptible to Scarlet Fever. The results are read in 24 and 48 hours later by observing those injections which have been completely neutralized by the toxin and show no reaction in the skin. The value of scarlet fever antitoxin in the treatment of scarlet fever, has been conclusively demonstrated in the past three years as shown by the numerous reports that have appeared in the medical literature from various sources. The administration of scarlet fever antitoxin is followed by a rapid fall in temperature, fading and disappearance of the rash, disappearance of the toxemia and decrease

in the incidence of complications and sequelae.

A fourth antitoxin which has recently been developed is Erysipelas Antitoxin prepared by the immunization of horses with toxin produced by growing in beef broth the streptococci specific for Erysipelas. The administration of adequate doses of this anti-toxin, which is prepared and concentrated by methods similar to those used for the other antitoxins, has resulted in greatly lessening the mortality from erysipelas.

Another group of biological products are the so-called anti-serums which are not true anti-toxins; Anti-Meningitis Serum, used for the treatment of meningitis, and which is prepared by the immunization of horses by the injection of living cultures of meningococcus; Anti-Pneumococcic Serum, which is used for the treatment of pneumonia, particularly that caused by type one, is also prepared by the injection of horses with live cultures of pneumococci. These sera are used in the unconcentrated form, and their effects are not as prompt or as certain as in the case of anti-toxins.

Bacterial vaccines, of which typhoid vaccine may be taken as a type, are prepared by growing the specific bacteria (for example B. typhosus) on the proper media, suspending the resultant growth in physiological salt solution, and standardizing the number of bacteria per c. c., and killing the organisms present either by a low degree of heat or by long-continued effect of some chemical germicide.

The potency of some of the bacterial vaccines is determined by testing their agglutinin-producing properties upon laboratory animals, while in the case of others there is no generally accepted method of standardization other than the estimation of the number of bacteria contained in a single dose. The value of typhoid vaccine as a preventive of typhoid fever has been so conclusively demonstrated that it is a surprise to occasionally encounter individuals who fail to recognize this value.

Rabies virus is made by inoculating rabbits with strains of "fixed" virus which cause the death of the animal after a definite period. The spinal cord is removed under aseptic conditions from the animal and dried for varying periods of time over caustic soda; an emulsion is then made with the dried cord and appropriate doses for each day of treatment made.

Recently, there has come into quite widespread use the Semple modification of the rabies vaccine which consists of 14 doses all of the same strength of killed rabies virus. The results from the use of the Semple treatment have been exceedingly satisfactory, on account of the lessened numbr of injections and the convenience with which it can be carried in stock ready for use.

Another important group of biological products is that classed under the heading of "Toxins" which are used both for determining susceptibility to disease and for inducing immunity thereto. Diphtheria toxin, put out for the Schick test, consists of the proper dilution of diphtheria toxin, the injection of a small quantity of which into the skin of susceptible individuals is followed by a definite reaction indicative of susceptibility to the disease. Susceptible individuals so determined can be immunized by the injection of proper doses of diphtheria toxin-antitoxin mixture. Scarlet fever toxin for the Dick test is used in a similar way for determining those who are susceptible to scarlet fever, and the reaction following a dose of scarlet fever toxin is apparent earlier and persists for a shorter time than in the case of the Schick test for diphtheria susceptibility. Individuals who are found susceptible to scarlet fever as indicated by a positive Dick test can be immunized by the injection of adequate doses of properly standardized scarlet fever toxin. Unfortunately, some of the early workers with scarlet fever used doses of scarlet fever toxin insufficient to bring about a definite and lasting immunity; but the Dicks now recommend at least 52,000 skin test doses distributed over a course of five injections, and they report that such a scheme of treatment is followed by 80 to 85% of immune reactions. Lately there has come into use so-called "detoxified" scarlet fever toxin prepared by mixing scarlet fever toxin with sodium recinoleate solution. It is claimed by the advocates of this procedure that the injection of one dose of this toxin will be followed by a negative skin test in a high per centage of those injected. It is doubtful whether one injection of detoxified toxin can be relied upon to confer immunity to scarlet fever, and until its true value can be determined, it would seem wise to proceed with caution.

The U. S. Government since 1902 has exercised supervision over all firms entering into the manufacture and interstate sale of biological products, and no firm can sell biologicals unless they have a license from the Secretary of the Treasury giving them this permission. License is not issued to

any firm until inspection has been made of the plant, personnel, operation and the product produced therein. From time to time inspectors are sent to these plants to make a thorough and painstaking inspection of all the factors concerned in the production of biological products. They also carry back with them to the Hygienic Laboratory in Washington samples of the various products which are manufactured, and samples of these products are also purchased on the open market—all of which are examined periodically in the Hygienic Laboratory. Manufacturers are required to conform to at least certain minimum standards which have been established by the Government for biological products, but some firms are not content with conforming to the minimum standards but have established for themselves standards far exceeding the governmental requirements. It is therefore important that those using biological products should obtain them from a firm which has adopted this policy.

There is probably no line of therapeutic products which requires a higher specialized knowledge of the various problems connected with immunity, and more fundamental knowledge of biological and physiological chemistry than the manufacture of this important class of preparations and few realize the great responsibility connected with the manufacture and dispensing of these preparations.

All biological products are required to have thereon what is known as the potency date which is defined in the law as "that date beyond which the contents (of the package) cannot be expected beyond reasonable doubt to yield their specific results. The government has established a potency date for the various classes of biological products. All of the anti-toxins are marketed with an excess number of units contained in the package which will insure the user of at least the number of units stamped on the label until the end of the expiration date. Other biological products, such as smallpox vaccine, diphtheria toxin for the Schick test, scarlet fever toxin for the Dick test, etc., have a potency date which reasonably insure the activity of the product until the expiration date. It must be remembered, however, that certain biological products are much more subject to the influence of heat than other products. Smallpox vaccine, for example, if kept at temperatures above 50°F rapidly loses its ability to produce a successful "take" and, therefore, it should be stored at all times below 50°F.

———B———

Chorio-Epithelioma

A. Boese, M.D., Coffeyville, Kansas

Read before Montgomery County Medical Society, Coffeyville, Kansas, March 18, 1927.

Chorio-epithelioma is formed by the proliferation of the cellular elements of the chorionic villi, namely, the syncytium and the cells of Langhans. In considering the growth of the tumor a brief review of the development of the enveloping membranes of the products of conception should be considered. The chorion is derived directly from the outer trophectoderm layer of the embryo. The trophectoderm of the embryo gives rise to a thickened outer layer, the trophoderm. The trophectoderm is the layer of Langhans cells, while the trophoderm is the synsytium. When the embryo develops, the trophoderm destroys the uterine mucosa, and villi grow out into the uterine mucosa. The trophectoderm evaginates into the villi. In the course of development of the placenta there is an invasive growth of chorionic villi into the uterine wall and it is not uncommon to find masses of syncytium-like giant-cells with many nuclei, lodged in the interstices of the muscle, deep in the uterine wall. Such masses have been found to invade blood vessels and to be carried as emboli into distant organs. These growths end harmlessly at the termination of pregnancy and they presently disappear.

During pregnancy there are two very curious anomalies of the chorionic villi. One is the hydatiform mole and the other is the chorio-epithelioma. In hydatiform moles there is a mass of polypoid gelatinous structures which hang together like a bunch of grapes. There may be no fetus at all, or the shrunken remnants of one, and the placenta is converted into a villous mass, which receives its name from its resemblance to the clusters of hydatids or cysts of the taenia larvae which are sometimes seen. Microscopically, these polypoid blebs are swollen chorionic villi, enormously enlarged, and covered with greatly proliferated epithelium. Chorio-epithelioma follow hydatiform moles in 50% of cases and many are preceded by normal pregnancy or abortion. It is true that a number of cases are reported in regions where fetal products are not likely to occur, but it is quite likely that the tumor develops either from congenital displacements or that other conditions have been mistaken for synctiomas. In chorio-epithelioma we have a carcinoma develop-

ing from the epithelial layer of the chorionic villi. There are two types, according to whether the syncytial elements prevail or the cells of Langhans. They are rapidly growing tumors, do not have their own blood supply and metastasis occurs early directly through the blood stream to liver, spleen, lungs, kidneys, brain, etc.

The diagnosis is made on the following symptoms:

1. Continual bleeding or hemorrhage following pregnancy, expulsion of hydatid mole, or abortion.

2. A uniformly enlarged uterus.

3. Sometimes a fungating growth protruding from cervix, or metastasis in vaginal vault.

The prognosis is variable depending on whether the Langhans cell or syncytial element predominates. The Langhans type is slow growing while the syncytial type is rapidly growing with an early tendency to metastasis.

The treatment is hysterectomy. There are cases on record where if the primary tumor was removed, the patient would recover, even with metastasis in the lung.

Mrs. R. H., 19 years old, white, married, housewife. C. C. Irregular bleeding, passing of clots, pain in left lower quadrant.

P. H. Patient had the usual childhood diseases. About two years ago while horse back riding, the horse fell with her, the saddle horn hitting her in the left lower abdominal region. She was in bed for some time at that time, but apparently completely recovered. Menses started at 14, always regular, some cramps, no clots. Denied any venereal infection.

P. I. About six months before I saw her, she missed a menstrual period, and so promptly took some medicine for this common ailment. She had some cramps, began to bleed, and began to pass some clots. She was then under treatment but the bleeding continued at irregular intervals. At one time she stopped bleeding for 21 days. At the time I saw her, she was bleeding, felt week, and spent most of her time in bed.

Ph. Ex. The patient appeared thin, anemic, rather slender, and walked with a slight stoop.

Her physical examination was negative except the pelvic findings. A hard round mass was felt about 1½ inches above the pubic bone. The mass was somewhat tender on pressure, and was immovable. No masses or tender areas in any other part of the abdomen were found. No inguinal adenopathy.

Genetlia normal.

On vaginal examination, with the speculum, the cervix was small, not discolored, a small clot was protruding from cervical os. No discoloration of vaginal mucosa.

On bimanual examination the cervix was hard, and not freely movable. The uterus was enlarged to about the size of a medium grape fruit, hard,, regular in outline, and fixed. The body of the uterus was tender. No masses felt in either cul-de-sac.

In view of the possibility of retained placental tissue, the cervix was packed for twenty-four hours and allowed to dilate. She developed some pains, which finally left. The uterus was then cureted, but no placental tissue was found. There was profuse bleeding and a uterine pack was left in for twenty-four hours. In spite of all precautions used, in 72 hours, she developed chills and shot a high temperature. This went on for several days, and finally a blood transfusion was done, with immediate cessation of all symptoms of a puerperal infection. About five weeks later she was allowed to get out of bed, with return of all former symptoms. A pelvic examination at this time revealed a uterus of about the same size and consistency plus an irregular mass on the left side seemingly attached to the uterus. A working diagnosis was made of a pelvic abscess, with the possibility of an ectopic pregnancy. An exploratory laparotomy was made and the following findings were present. A boggy uterus about the size of a grape fruit. On the left cornu, a large, very dark red mass, about 1½ inches in diameter was attached to the uterus at the site of the left tube. There were several smaller ones on the anterior surface, on the left lateral surface and also some on the posterior side. These masses were very friable and bled freely. The bladder was attached to the anterior surface of the uterus, and the posterior bladder wall had the same appearance, dark red, and was also very friable. Hysterectomy was not performed because of the friable nature of the tissue. The largest mass at the left cornu was removed, and the abdomen closed with a drain.

The patient rallied well from the operation, when on the 3rd post-operative day, she suddenly developed a severe pain in the lower abdomen, and began to go into shock. At the same time the patient began to pass a thick bloody urine. She was given about 500 c. c. 10% glucose intravenously with 18

units insulin U. She had a severe chill following this but began to improve for a short time. On the 5th day a transfusion by the indirect method was done, the whole quantity being given about 800-900 c. c. The improvement was immediate. Through all this she continued to pass blood from the bladder, and she died on the 7th postoperative day.

LABORATORY REPORT

GROSS PATHOLOGY—Specimen consists of an irregular, rounded mass of tissue measuring about 4 cm in diameter. The external surface was covered with loose adhesions of both fibrous appearing tissue and a yellowish cellular like tissue. On cross section the structure showed masses of dense infiltrating hemorrhage and within this there were some irregular white cellular areas.

HISTOLOGICAL PATHOLOGY—The section shows a great deal of necrosis and rather extensive areas of hemorrhage. There is some slight secondary inflammatory reaction in the necrotic masses. Around the outside of these necrotic masses the tissue is vascular. Some very irregular and atypical masses and sheets of tumor cells may be noted, particularly around some of the blood vessels. These tumor cells in general are rounded, rather small and do not contain much cytoplasm and contain a rather deep satining nucleus. Among these smaller and rounded and palygonal cells there are several large syncytial like masses of cells, some with several nuclei and others with abnormally large nuclei and considerable cytoplasm suggesting a syncytial origin. The general architecture of the tumor tissue is extremely atypical anl unusual. It suggests a syncytioma but of an unusual and atypical character. These tumor masses may be seen infiltrating into the smooth musculature in one section. There is marked variation in the size, shape and staining of the cells. No definite mitotic figures, however, were seen.

DIAGNOSIS—Chorio - epithelioma, malignant.

H. R. WAHL, Pathologist.

Treatment of a Case of General Paresis by Means of Coley's Fluid

J. ROTTER, M.D. and J. A. KNOOP, M.D.
Parsons, Kansas

Mr. D. M., age 50 years; single; first seen Nov. 10, 1925; physical findings as follows: Patient was complaining of forgetfulness, lack of concentration, headaches, general debility, generally melancholic. His relatives noticed that his judgment along different lines was plainly defective and he frequently contradicted himself. On the whole, his behaviour was more or less uncertain.

A general examination revealed Argyl Robertson pupil, slight tremor of tongue, and his knee jerks were exaggerated, slight ankle clonus; Babinski positive. His blood Wassermann was 4 plus; urine showed albumin 1 plus. A diagnosis of general paresis was made and antiluetic treatment was advised. The patient carried out the suggestion and two series of salvarsan and mercury treatments were given by his family physician in another town.

On Jan. 6, 1926, some fourteen months later, the patient's sister brought him back for further advice. She stated that for the past several weeks, his memory had almost entirely disappeared and that he did not pay any attention to his surroundings; that he had completely lost his sense of decency; ate at the table with his fingers instead of using table ware and passed urine involuntarily. He had all sorts of delusions and hallucinations. His sister insisted that something more be done if possible.

Not having access to any malarial blood, we gave him intravenous injections of Tryparsemide 2 gm at weekly intervals—a total of four injections. His condition remained unimproved. We felt that in the absence of malarial blood it might prove beneficial to try some other protein which would give him the desired reaction and incidently one which might be controlled with more ease than a malarial infection. Accordingly we proceeded to give him intravenous injections of Coley's fluid every other day—beginning with three minims and gradually increasing until fourteen injections had been given. The last dose was 30 minims and the period of time covered by those was thirty-two days.

After the patient received his fourth injection, a plainly marked improvement was visible and by the time his fourteenth injection was given all hallucinations and delusions had disappeared. His mental condition had improved to the extent that he could carry on an ordinary conversation without apparently showing any sign of mental deterioration. His table manners and general moral tone were without fault.

We do not feel that this patient is capable of conducting his business, namely that of operating a hardware store, but we do feel that, under the direction of someone

else, he could fill almost any clerical position.

Upon cessation of administration of Coley's fluid, we resumed the injections of Tryparsemide supplemented by injections of Potassium-Bismuth-Tartrate 0.1 gm, of which two series each were given.

A blood Wassermann made on July 19, 1927, was 1 plus.

COMMENT

We are reporting this case because it is the only case in which, to our knowledge, such treatment has been used.

That Coley's fluid is much more flexible in its dosage and far more desirable than producing another disease such as malaria, which is not always easily controlled in patients with neurosyphilis, goes without saying.

It is hoped that this report will stimulate further work along the same line.

———R———

KANSAS MEDICAL LABORATORY ASSOCIATION

Laboratory Analysis of Milk

NEVA RITTER

Bacteriologist Kansas City Consumers' League

With ever-increasing attention being paid to the sanitary quality of our milk supplies, more and more laboratories are adding milk testing to their routine.

"Standard Methods of Milk Analysis of the American Public Health Association and the Association of Official Agricultural Chemsts" published by the American Public Health Association, 370 Seventh Avenue, New York City, price fifty cents, should be in the hands of everyone who is contemplating any official milk analysis.

In the Kansas City Consumer's League laboratory methods outlined in "Standard Methods" are followed as far as they are given, the following being a brief outline of their methods.

All samples are iced immediately upon collection and held around 45°F until plated. An unopened bottle of milk is usually used as a sample, but when samples are wanted from other sources they are collected in 1-ounce, screw-capped vials, which have been sterilized in an oven.

For most of the milk tested in this laboratory, a 1:100 dilution gives plates with less than 300 colonies. However, with a sample from an unknown source or one expected to have a high count, two dilutions are plated, 1:100 and either 1:1,000 (made by plating .1 cc of the 1:100 dilution) or 1:10,000. The 1:100 dilution is made by adding 1 cc of the milk to a 99 cc blank of sterile tap water. "Standard Methods" agar is used and incubation at 37.5°C for 48 hours.

Routine samples are examined for visible sediment by observing any moving specks there may be on the bottom as a bottle is turned. The official sediment test is used only when special information is wanted.

The Babcock fat test completes the routine.

Some other tests, found to be of value in the work of this laboratory and most of which are not in "Standard Methods" are:

Samples to check udder infection of the cow may be examined by the Breed method of microscopic count ("Standard Methods") with great success.

Lactose fermentation tests for members of the B. coli group, with confirmation on Endo or Eosin-Methylene blue plates, are made when there may be gross contamination.

Flavor presents such a complex problem that it must be approached by both bacterial and chemical tests, and field investigation of the feed of the cows and the dairy surroundings.

As a check on dairy sterilization, milk bottles which are ready to be filled are tested routinely as follows: The top of the bottle is flamed and cap removed and held in a flame while 100cc of sterile water is poured into the bottle and the cap replaced. It is then shaken twenty-five times with a rotary motion to wash the interior completely, and 1cc portions of this rinse water plated. Plates are incubated the same as milk plates. A count of such a plate, multiplied by 100, indicates the contamination of the bottle.

Skimming or watering of milk may be suspected when abnormal percentages of solids are found on calculation from the lactometer reading and butter-fat content, but this should be used only as a guide pointing to the making of more accurate tests, and not relied upon for official purposes.

The Rosolic acid test for carbonates as given in Leach, "Food Inspection and Analysis," page 167 (Fourth Edition), is useful in detecting neutralization of sour milk or cream.

———R———

A mental acrobat with a vivid imagination and considerable credulity might fully appreciate the scientific importance of some of the research work now being done. But no one can tell from a colt's teeth what kind of a horse he will make.

THE JOURNAL
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W. E. McVEY, M.D. - - Editor

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SLOW BUT SURE

As a result of the discussion on the subject of medical legislation at the last meeting of the Society, the Bureau of Public Relations was instructed to prosecute a vigorous campaign to secure a satisfactory law governing the practice of the healing art.

Several points were generally agreed upon by the members of the House of Delegates, one was that it was important to start the work early. With this in mind an effort has been made to develop a statewide campaign committee, and the councilors were requested to suggest members from each of the counties in their districts. As soon as these lists were received from the councilors the men suggested were advised of their appointment and requested to notify the Secretary of the Bureau if they were willing to serve on this committee. The larger part of these letters were mailed between the third and fifth of August. Additional letters were mailed to a few whose names were later suggested at various intervals since then. Up to the date of writing this, acceptances have been received from fifty of the men appointed. While a representative in each of fifty counties in the State should be able to do good work it falls far short of a complete organization. There are eight counties in the State in which there is no member of the Society. Of the ninety-seven men appointed on this committee there are forty-seven who have neither declined nor signified their willingness to serve. A little more time will be consumed in waiting for replies from these, and still further time will be lost in securing men to fill places on the committee not accepted by those already appointed.

In the meantime the work is getting well started. One of the first and most important things to be done is to learn definitely the attitude toward better laws governing the practice of the healing art of every candidate for nomination and to support only those who are known to be favorably inclined. This is really a matter of the utmost importance. The members of the medical profession can afford to forget party affiliations in a matter of this kind.

It is quite as important to ascertain the attitude of the members of the legislature who hold over. In some instances it will be possible to show them the advantages of a better control over those who attempt to heal the sick, but in any event it is very important to know how each one of them stands. In fact, it should be possible, when the next legislature meets, to know just how every member may be expected to vote.

Another point about which there was general agreement at the last annual meeting was that we should have fifteen or twenty doctors in the next legislature. One of our members has consented to be a candidate for the Senate and has secured the endorsement of his party leaders. There are quite a number of doctors in the state that could easily be elected to the House or Senate if they could be persuaded to get into the race, but it requires a good deal of time for a campaign of that kind and it costs some money. Then it means that if elected he must be away from his practice for at least two months at a per diem which does not meet his expenses. There are quite a few men in our profession, however, who

cen well afford to accept an honor of this kind at a pecuniary loss and will make whatever personal sacrifice is called for when made to realize how great a service they can render the profession as well as the people.

If we have fifteen members of the House and five members of the Senate that will stick together, there will be no difficulty in getting a bill passed. As one of our members, who has had considerable experience in legislative work, told us, legislation is largely a matter of compromise. There are a good many important bills before the legislature every year in which a matter of fifteen or twenty votes spells success or failure. The legislature don't care anything about medical legislation, that is simply something to play with and laugh at, but twenty men who go there to get medical legislation won't be played with very long if they stick together.

It is also quite important that the kind of legislation we shall ask for shall be definitely agreed upon. It was considered last winter that the Basic Science bill gave more promise of favorable consideration than any that could be devised. It provided for a board to examine every applicant in the basic sciences, anatomy, physiology, pathology, chemistry, bacteriology, etc. Receiving a certificate from this board the applicant must then apply to the Medical Board, Osteopathic Board or Chiropractic Board.

It in no manner disturbed the boards or the laws now in existence, but none of these boards are permitted to examine or pass upon an applicant until he has received a certificate from the Basic Science Board. It is of course a provision that this Basic Science Board shall be composed of men not engaged in any form of the healing art, but should be qualified in the Basic Sciences. The bill introduced last winter specified who should constitute this board so that any political advantages the creation of a new board might have afforded were lost. The constitution of the Basic Science Examining Board is an important problem that some one must find a satisfactory solution for before a similar bill is introduced.

If it be determined to attempt the passage of the Basic Science bill, there is another little piece of legislation that must not be overlooked. Some years ago when the law providing for a chiropractic board of examiners was passed an amendment was made to the Medical Practice Act which exempts both osteopaths and chiropractors from its provisions. Whether the Supreme Court would interpret this according to the wording of the amendment or according to the intention of the legislature has not been determined but certainly according to the wording neither an osteopath or a chiropractor can be prevented from practicing medicine under its provisions.

When the law creating the osteopathic board was passed, they did not desire or claim to practice medicine. Certainly it is very unfair to compel a doctor of medicine to go through such an ordeal as the examination given by the Board of Medical Examination only to come in competition with men who have been exempted from it. The doctors over the State do not seem to object so much to the osteopaths and chiropractors as such, as to these men practicing medicine and surgery. Of course there is no question whatever about the injustice of the matter as it now stands and it must be a part of our efforts to correct this situation.

SALVAGE THE WASTE

The science of medicine has been delayed in its development by a number of factors, some of them closely allied with the personal characteristics of those who have constituted the medical profession. Curiosity or inquisitiveness is one of the strongest and surest incentives to careful and thorough investigation. An insatiable curiosity alone is a greater incentive to honest, tireless, painstaking investigation than is a hope of honor or reward; or curiosity associated with a hope of honor or reward. Unfortunately there are not many men in medicine who have the sort of curiosity

that will resist the temptations of a lucrative practice or withstand the social and physical deprivations encountered by the persistent seeker of knowledge; and there are not many men in medicine who are endowed with such a curiosity and sufficient wealth to indulge it.

One might easily arrive at the conclusion that ambition is a more prevalent incentive than curiosity in a large per cent of the researches now being conducted. This is evidenced by the particular importance given to the question of priority, by the detailed descriptions of the hairline differences in the technical minutiae of the procedures and the meticulous care with which credit is given to each worker for any finding he may have made, whether of any particular bearing on the final developments or not. There must always be some suspicion of researches conducted under these conditions and few reports are accepted until the findings have been confirmed by other workers in the same line. It is possible at least that when ambition is the principal incentive, inaccuracies in the procedures will be overlooked or ignored and reports of findings will be premature.

Darwin began the study of medicine but didn't like it. He was endowed with marked inquisitiveness and sufficient wealth to supply all his wants. One can only imagine what he might have added to the science of medicine had he completed his course of instruction and devoted his inquisitive mind toward solving the riddles in the etiology of diseases.

Opportunities have fallen to the hands of many men to solve some of the greatest problems in medicine and they have allowed them to pass for lack of curiosity or other incentive to prosecute a search for further knowledge. It is doubtful if Alexis St. Martin offered the first opportunity for such investigations as were conducted by Beaumont, but Beaumont was the first man that had the incentive to take advantage of such an opportunity.

Some of the observations that have formed a basis for some of the most important findings in medicine had been made many times and by many men before they were made by one who had the curiosity to find an explanation or the ability and the facilities for conducting an investigation.

Most any man who has practiced medicine for a score of years has made some clinical observation that if properly verified and reported would have added something of importance to our knowledge of medicine. But it would be incorrect to say that if all of the clinical observations made twenty-five years ago had been reported the science of medicine would have been advanced twenty-five years, for several reasons. In many instances there is no opportunity for the physician to verify his observation in a sufficient number of cases to prove that the phenomenon of whatever nature may not have been merely a coincidence. Clinical findings which are not shown to occur with considerable regularity in a considerable number of cases, a number larger than the average general practitioner is likely to encounter in many years of practice, are not regarded as of scientific value; but even when so protected they must be carefully verified by other observers before they will be accepted. Provided, the observer is not among the recognized authorities in medicine, for in that case his dictum is accepted by the profession with greater confidence than the most elaborately detailed report of an unknown and unvouched for investigator.

Discoveries of great value to the profession are being made, by careful, persistent and thoroughly scientific investigators, that were known and recognized by some man somewhere in the profession many years before. For there are men in the profession endowed with Darwinian inquisitiveness but lacking in ambition and shy of publicity, so that what they learn, though never hidden from inquiring minds, is seldom broadcast. They are accomplishing things in their own little sphere of usefulness that the medical world knows nothing of and would refuse to believe if it were told.

In 1885 the writer witnessed a resection

of a knee joint, by a surgical genius in a little mid-western city, in which a common nail was used to hold the approximated ends of bones in place. He made no claim for originality or priority and considered the procedure as ordinary. But some twenty-five years later an Eastern surgeon reported a similar operation in which the use of a nail for the same purpose was mentioned as an original and unique procedure.

It seems to be a characteristic of men in the medical profession to first consider the source of any information handed them and then the possible value of the data presented. A man who is mostly unknown, who is not highly connected and vouched for, or who may not tail-out his name with a considerable part of the alphabet, stands a poor chance to be heard in the larger meetings of his fellows and a poorer chance of finding a medical journal that has room for his reports.

Much valuable information can be obtained from the unobtrusive, quiet, inquisitive men in medicine, for they are not secretive, but they abhor a loud-speaker and big headlines.

UNEXPECTED DEFENSE

The generation of doctors preceding this one and the generation preceding that regarded as extremely unethical any criticism of one or more members of the profession in the presence of laymen. Now that it seems to be a popular pastime for those who have been distinguished by the admiration and confidence of their confreres to arraign the profession in groups and in mass, in public lectures and in the newspapers, as criminals or potential criminals, it is particularly gratifying to find the strongest defense coming from laymen and from very unexpected sources. As an illustration we reproduce the following editorial which appeared in the Christian Science Monitor of July 28.

"Under the heading, 'The Flood of Medical Booze,' Dr. William Brady, who conducts a column in several newspapers in the United States having the general caption, 'Personal Health Talks,' recently made a number of startling statements regarding liquor and the medical profession. But few physicians of standing before prohibition ever prescribed as much as 100 pints of whisky in three months, he declared. In fact, he added, 'the scientific ground on which the medicinal use of alcohol rested was steadily crumbling away.'

"With the advent of the Volstead Act, he claims a good many doctors readily entered upon a criminal distribution of liquor. He adds significantly, however, that it is common knowledge that 'alcohol did our country infinitely more harm in the pre-prohibition days than even the synthetic, poisoned or bootlegged stuff does today.'

"In thus calling attention to what he refers to as a laxity of ethics in the medical profession, Dr. Brady runs the risk of giving the impression that such a practice as he describes is common. That some medical men lower themselves to these practices is true and deplorable. That most of them do so is false. It is important to avoid conclusions based on inadequate premises. And the sweeping implication that the medical profession is entering wholesale upon such dishonest methods cannot be too strongly denied."

It is always safe for one who is fanatically inclined to make broad statements that cannot be disproved any more than they can be proved; and there are always people who are glad to accept them as true. It would be interesting and perhaps instructive if some of these scarecrow fabricators would state the grounds upon which they base their conclusions that a revision of the Volstead Act to give more liberty to the doctors in prescribing alcoholics would make of the medical profession a profession of bootleggers. We have had and still have the privilege of prescribing opiates according to the requirements of our patients but no one has yet claimed that we are a profession of dope peddlers.

There is at least as large a proportion of honorable men in the medical profession as in any other group of citizens; however, one's estimate of any group of citizens is likely to be made up from his knowledge of the personal characters of his intimate associates in that particular group. Any member of the medical profession who believes that to leave physicians free to treat the sick as their knowledge and experience

may dictate, will make criminals of them, has been rather unfortunate in his associates.

CHIPS

Sick people are anxious to get their health back, but they don't care how it is done.

A lot of censure seasoned with just a little praise may be fairly palatable.

There are those who believe they can determine the relation of blood pressure to actual conditions better by palpating the pulse than by the use of a sphygmomanometer . But why not use both?

Our correspondent says: "There are several women in Los Angeles who wear two pairs of garters; one pair to hold their stockings up and the other pair to hold up traffic. It's a success."

There is a good deal of difference between what a man knows and what he thinks he knows. In medicine there is a lot of difference between what a man sees and what he thinks he sees. But no one has discovered a lens that will correct a mental strabismus.

The dendrograph is an instrment used to measure the growth of trees. It is belted to the tree and a pin stuck in the bark and attached at the other end to a lever records the growth on a dial. It is suggestel that this instrument be adapted to the needs of the ultar-dietitians, so they may determine the rate of growth of the arms and legs of non-agers and the shrinkage of the aged.

An old theory that has been rejuvenated is that "the heart is not the prime motive power of life, but as an organ plays a secondary part. It is the cells of the body, in absorbing and eliminating fluids, that constitute the chief motive power in forcing the blood through the system." It is very much easier to formulate a theory than to prove it.

A correspondent suggests that in using the liver diet in persons whose food antipathies cannot be overcome, liver may be prepared in the form of ice cream. He gives the following recipe: Cream, one-half pint; sugar, one-half ounce; cocoa, one-half ounce; ground liver, one-half ounce or more. Mix, freeze and eat.

It is reported that Dr. Victor E. Levine, professor of biologic chemistry and nutrition at the Creighton School of Medicine, Omaha, said at the sessions of the Western Hospital Association and the State Dietetic Association in convention at Los Angeles, June 2, 1927, that by the year 2000 the average span of human life will have increased to 100 years. He did not say what a man's object would be in living so long. It would at least be interesting to know on what grounds he bases his prediction.

The census report for 1924 shows that only three people out of each 100,000 live to be 100 years old. It is claimed that the average span of human life is now 58 years. This has been brought about largely by the prevention of contagious diseases among children. There were 209,642 more children under five years of age in 1924 than in 1922, but there were 17,492 fewer deaths. There was very little difference in the proportionate number of deaths in other age groups.

A method has been suggested by Rabl for softening the bones in children before attempting to correct deformities. This he accomplishes by producing a general and local acidosis. Ammonium chloride, 0.2 g. per kg. of body weight per day, is given to produce the general acidosis. To produce local acidosis a rubber bandage is applied to cause congestion in the limb. It is used tight enough to produce slight cyanosis and is kept on for about twenty hours daily. In from 8 to 18 days the bones are so soft that they can be bent and the deformity corrected. During this preparation antirachitic diets and sunlight are avoided. As soon as the deformity has been corrected they are put on antirachitic treatment.

Obesity is caused by an anormally increased transformation of carbohydrates into fats is the conclusion arrived at by Hagedorn, Holten and Johansen, from some experiments recently reported in the Archives of Internal Medicine for July. A number of normal and obese persons were examined to determine their respiratory quotients after they had eaten for two days a diet consisting chiefly of carbohydrates. The respiratory quotients were lower in obese persons than in normal ones and a relation was established between the percentage of overweight and the respiratory quotient. Patients with great overweight have a particularly low respiratory quotient, those with less overweight have a respiratory rate nearer or within the normal limits.

Is It True?

THE PRODIGAL

The National Astrological Association is in session in Hollywood, California (July 30, 1927). The assertion is made that "Astrology is a science." At the same time, one of the purposes of the meeting is "to establish Astrology on a scientific basis." So far so good. The next statement is that "many physicians use astro-therapy in their practice. Its main purpose is to help by revealing tendencies which may make or mar a life. The science itself rests on a scientific educational basis. When properly understood it is a great aid in building character, stimulating effort and giving strength and courage for life's battles. As the first procedure of the physician is to diagnose the malady, so the purpose of astrology is to reveal causes which lead to effects, mental, moral and physical. The basic cause being known, the first step is taken in the curative work. The relation of surgery and medicine to astrology and diagnosis, by astrology, given by authorities, are features of the convention."

Astrology promises to be another study in the curriculum of the medical college, titled astro-therapeusis. The study will be confined to the zodiac as a cause of disease and will be a specialty. The zodiac as the cause of a disease cannot be easily removed. But, knowing the cause, the same as knowing of any threatened danger, is a forewarning and will help to sidetrack its bad effect. The almanacs of fifty years ago always carried the signs of the zodiac on the second page. The sign was the picture of a man, standing nude, frontface, arms outstretched, belly cut open and contents exposed. He was encircled by a ring and there were twelve arrows equally spaced on the circle, representing the twelve months in the year, the arrow heads pointing toward some vital organ in the man's body. The arrows pointed from each month to a specific organ, told what should or should not be done to the animal during that month. For example, suppose the arrow from April pointed to the heart, showed that a calf should not be weaned in April. If the May arrow pointed to the generative organs, the pig, calf, colt, etc., should not be castrated in May, and so on down the line.

This explanation will give the surgeon an outline for his guidance and he can guess at and fill in at the time when to operate, according to his knowledge of the movements of the zodiac. The physician or internist will have to work out his own salvation—with fear and guessing.

It seems to me that astro-therapy, mind treatment or psychology in all of its phases, Christian Science included, may be summed up in two words—suggestive therapeusis—and is the same as religion. Any religion that makes a man a better citizen and an all around man is a good religion, and any treatment that cures or helps to cure a sick patient is good therapy. The astro or zodiac cult will soon be with us.

By the way, in the newspaper write-up of the astrological meeting, the statement is made that "many physicians now practice astro-therapeusis, but fear of ridicule, shame or cowardice on the part of such practitioners keeps them from letting it be known."

Are you guilty?

—B—

SOCIETIES

STAFFORD COUNTY SOCIETY

Society met Aug. 10th at 8:00 P.M., at the residence of Dr. J. T. Scott in St. John. This was the third public meeting held this summer and the largest in attendance, there being over seventy-five people present.

The Stafford County Medical Society claims originality in the innovation of inviting the public to their regular monthly meetings, and is thoroughly convinced of two things: first, that the public is interested and will attend; second, that it is the practical method of disseminating medical propaganda.

Dr. Bernstorf of Pratt, one of the speakers of the evening, told the writer that the Pratt County Society would inaugurate the same custom.

Dr. Scales of Hutchinson, another speaker on the program said: "I am astonished at this great attendance and interest of the lay public."

For the benefit of other County Society Secretaries who may decide to experiment in inviting the public, I give another of the popular programs that have been so well received:

1. Medical Progress, Dr. H. L. Scales, Hutchinson.
2. X-Ray Pictures of Arm Fractures, Dr. W. F. Bernstorf, Pratt.
3. Violin Solo, Miss Ione Aitken, St. John.
4. Reading, "A Real Asset," Miss Betty Scott, St. John.
5. Vocal Solo, Mrs. J. F. Williams, St. John.
6. Refreshments.

There is no possession, no earthly wealth,
Comparable to that of having good health;
Are you just living to eat and drink,
Or eating and drinking to LIVE? Just think.

Dr. Scales went back of the discovery of the microscope and told of the wonderful progress medicine hade made, particularly in the last fifty years. How it had more than kept step with all other departments of science and had made possible the accomplishment of great industrial projects that awaited medical discoveries. His language was chaste, refined and nontechnical. He not only interested his audience, but delighted them as well.

Dr. Bernstorf gave another of his popular talks on fractures and displayed radiographs of the difficult and dangerous arm fractures.

Miss Ione Aitken gave two violin numbers that could not have been better rendered by a master.

Mrs. Williams' voice was at its best and of course she sang beautifully. Mrs. Osborne, as pianist, and Miss Aitken, as violinist, accompanied her.

Miss Betty Scott, eight years of age, was showered with congratulations at the conclusion of two readings, "A Real Asset" and "The Bugaboo."

Following the program light refreshments were served cafeteria style and everybody remained for the eats and concluding half hour of social intercourse.

J. T. Scott, Secy.

FRANKLIN AND ANDERSON COUNTY SOCIETIES

At a joint meeting of the Franklin County and Anderson County Medical Societies, an annual meeting, a chicken fry supper was held at Richmond club house. The speaker was Charles B. Griffith, former attorney general of the state, whose subject was "Jealousy, the Scourge and Canker of Mortals." The former attorney general took as his motif, Othello, the Moore of Venice. From this masterpiece of Shakespeare he monologued the lines and interspersed his own inimitable comment, bringing out to his hearers all the finesse of the great playwriter in dealing with his subject.

The meeting of the two societies was well attended. Caretaker Wantland and wife had charge of the serving. Among those present were:

Dr. Hare, president, and Mrs. Hare, of the Anderson County Society; Dr. and Mrs. Hood, Dr. and Mrs. Johnson, Dr. Turner and Dr. Milligan, all of Garnett; Dr. and Mrs. Douglas, Dr. and Mrs. Secaley, Dr. and Mrs. Spears, of Osawatomie; G. F. Kaiser, Miss Clara Kaiser, Mrs. P. H. Klinkenberg, Mr. and Mrs. J. L. Shelden, Homer Kint, John Quinn, Drs. Dawson and Louis Gilley, Mr. and Mrs. Bert Bell, Mr. and Mrs. Harold J. Lamb, Dr. and Mrs. P. R. Young, Dr. and Mrs. H. J. Terrill and daughter, Dr. and Mrs. F. A. Trump and son, Dr. V. E. Lawrence, Miss Emily Lawrence, Dr. and Mrs. H. L. Kennedy, Dr. J. M. McWharf, Dr. H. W. Gilley, Dr. John Dyer, Dr. T. C. Hinkle, Dr. Josaphyne E. Davis, Dr. George W. Davis, president, and Dr. J. R. Scott, secretary, of the Franklin County Society, all of Ottawa.

Program—Medical Society of the Missouri Valley, Des Moines, Iowa, September 14, 15, 16, 1927

The annual meeting of the Missouri Valley Medical Association will be held at Des Moines, September 14, 15 and 16. All who attended the Omaha-Council Bluffs meeting of this association last year were loud in their praises of the program. A program of equal, if not greater, value has been provided for the Des Moines session.

Members from the faculties of the universities of the district are cooperating in sending the best that they have to these meetings. Over half the program will be given by men from the faculties of Iowa, Kansas, Nebraska, Creighton, St. Louis and Washington Universities.

The following guests will appear on the program: W. T. Bovie, Ph. D., Professor of Biophysics, Harvard University; A. J. Carlson, Ph. D., M. D., Professor of Phsysiology, University of Chicago; George B. Eusterman, M. D., of the Mayo Clinic, Rochester; Herman L. Kretschmer, M. D., Professor of Urology, Rush Medical College; Lewis J. Pollock, M. D., Professor of Neurology and Psychiatry, Northwestern University; Oscar M. Gilbert, Associate Professor of Medicine, University of Colorado.

There will be an ample number of clinics. In addition material of interest will be presented by selected members of the association. It has been the policy of the Program Committee to select the men and work to be presented and not to send out general requests for papers. Only in this way has the committee felt that the high standard of the programs of the last two years can be maintained.

Following is the preliminary program for the meeting:

WEDNESDAY MORNING SESSION

9:30 Recent Developments in Muscle Physiology—H. W. Dahl, M. D., Des Moines, Iowa.

10:00 Clinical Signs of Peripheral Nerve Injury—Lewis J. Pollock, M. D., Professor and Chairman of the Division of Neurology and Psychiatry, Northwestern University College of Medicine, Chicago, Ill.

10:30 Recent Developments in Pernicious Anemia—Walter L. Bierring, M. D., Des Moines, Ia.

11:00 Facts and Fancies on Present Day Organotherapy—A. J. Carlson, Ph. D., M. D., Professor and Chairman of Department of Physiology University of Chicago Medical School, Chicago.

AFTERNOON SESSION

2:00 Clinic—Lewis J. Pollock, M. D., Professor and Chairman of the Division of Neurology and Psychiatry, Northwestern University College of Medicine, Chicago, Ill.

3:00 Granuloma Coccidioides with Report of a Case—C. C. Tomlinson, M. D., Assistant Professor of Dermatology and Syphilology, University of Nebraska College of Medicine, and Paul Bancroft, B.Sc., Fellow Department of Experimental Medicine, University of Nebraska College of Medicine, Omaha, Neb.

3:30 Study of a Case of Nephritis—A. D. Dunn, M.D., Professor and Chairman of the Department of Experimental Medicine, University of Nebraska College of Medicine, Omaha, Neb.

4:00 Foreign Bodies in the Esophagus and Respiratory Passages—Bernard M. Kully, M. D., Assistant Professor of Otorhinolaryngology, Creighton University College of Medicine, Omaha, Neb.

4:30 Surgical Treatment of Carcinoma of the Breast and Acute Gangrenous Perforated Appendicitis—Illustrated by Motion Pictures—Caryl Potter, M. D., St. Joseph, Missouri.

EVENING

8:15 How We Learned to See and How We Have Learned Some Other Things (by request)—W. T. Bovie, Ph. D., Professor of Biophysics, Harvard University, Boston, Mass.

9:30: "Tigers"—Lantern Slide Talk on Big Game Hunting in Indo-China and India—Richard L. Sutton, M. D., Professor of Dermatology, University of Kansas College of Medicine, Kansas City, Kan.

THURSDAY MORNING SESSION

9:00 The Problem of Ureteral Obstruction—Nelse F. Ockerblad, M. D., Associate Professor of Clinical Urology, University of Kansas College of Medicine, Kansas City, Kan.

9:30 Consideration of Some Border-line Problems in Urology:Herman L. Kretschmer, M. D., Professor of Urology, Rush Medical College, Chicago, Ill.

10:00 The Diagnosis and Modern Treatment of Trigeminal Neuralgia Major—Wm. T. Coughlin, M. D., Professor of Surgery and Director of Department, University of St. Louis, School of Medicine, St. Louis, Mo.

10:30 Etiology and Mechanism and Treatment of Hypertension—Ralph H. Major, M. D., Professor of Medicine, University of Kansas College of Medicine, Kansas City Ks.

11:00 Some Fundamental Principles of Radiation Therapy—W. T. Bovie, Ph. D., Professor of Biophysics, Harvard University, Boston.

AFTERNOON SESSION

2:00 Clinic—Herman L. Kretschmer, M.D., Professor of Urology, Rush Medical College, Chicago, Ill.

3:00 Perverted Physiology as a Factor in Diagnosis of Diseases of the Biliary Tract—C. C. Nesselrode, M.D., Associate Professor of Surgery, University of Kansas College of Medicine, Kansas City, Ks.

3:30 Some Observations on the Treatment of Pernicious Anemia—A. P. Munsch, M. D., University of St. Louis, St. Louis, Mo.

4:00 Clinic—Wm. T. Coughlin, M. D.,

Professor of Surgery and Director of Department, University of St. Louis School of Medicine, St. Louis, Mo.

EVENING

6:30 Dinner — Presidential Address — Salt in Medicine—Thomas G. Orr, M. D., Professor and Chairman of Department of Surgery, University of Kansas College of Medicine, Kansas City, Kan.

FRIDAY

9:00 Hopeful Aspects of the Study of Cancer—David P. Barr, M. D., Professor of Medicine, Washington University, St. Louis, Mo.

9:30 High Lights of Gastro-enterologic Progress—George B. Eustermann, M. D., Mayo Clinic, Rochester, Minn.

10:00 Foreign Protein Treatment in Obstetrics and Gynecology—E. D. Plass, M. D., Professor and Chairman of Department of Gynecology and Obstetrics, University of Iowa College of Medicine, Iowa City, Ia.

10:30 The Duties of Practitioner in Prevention of Spinal Deformities—Arthur Steindler, M. D. Professor and Chairman of Department of Orthopedics, University of Iowa College of Medicine, Iowa City, Ia.

11:00 Atypical Chronic Glomerulor Nephritis—Fred A. Smith, M. D., Professor and Chairman of Department of Theory anl Practice of Medicine, University of Iowa, College of Medicine, Iowa City, Ia.

11:30 Observations on the Arrest of Dental Caries in Children—J. D. Boyd, M. D., Professor of Pediatrics, University of Iowa, College of Medecine, Iowa City, Ia.

AFTERNOON SESSION

1:30 Clinic—George B. Eusterman, M. D., Mayo Clinic, Rochester, Minn.

2:30 (Title unannounced)—Donald Maccrae, M.D., Council Bluffs, Ia.

3:00 Practical Application of Forceps, Illustrated on the Maniken—F. B. Langdon, M. D., Des Moines, Ia.

3:30 The Control of Ciliary Activities with Clinical Implication—James F. McDonald, M. D., Professor of Physiology, Creighton University College of Medicine, Omaha, Neb.

4:00 Progress in the Treatment of Tuberculosis — Oscar Monroe Gilbert, M. D., Associate Professor of Medicine, University of Colorado College of Medicine, Boulder, Colo.

The American College of Surgeons

The American College of Surgeons will hold the seventeenth Clinical Congress in Detroit, October 3-7. Headqarters will be at the Book-Cadillac and Statler hotels, and the meetings will be held at the Statler Hotel and Orchestra Hall. The Hospital Standardization Conference will extend from Monday morning to Thursday afternoon and will include a discussion of hospital and nursing problems and hospital demonstrations. Monday evening's program will include an address of welcome by the local chairman, the address of the retiring president, the inaugural address of the new president, and the John B. Murphy oration. Clinics in general surgery will be held in the Detroit hospitals each morning from Tuesday to Friday, and in eye, ear, nose and throat work the same afternoons. Clinics will also be held at University Hospital, Ann Arbor, Tuesday to Thursday. On Tuesday and Wednesday mornings and afternoons, and on Thursday morning, clinical demonstrations will be held at the Statler Hotel (mornings) and Orchestra Hall (afternoons). On Thursday afternoon the annual meeting of the Governors and Fellows will be followed by a cancer symposium. On Friday afternoon there will be a symposium on traumatic surgery, to be participated in by leaders in industry, labor, indemnity organizations, and the medical profession. On Tuesday evening the program will take the form of a celebration of the Lister centennial. On Thursday evening there will be a large Community Health Meeting in the Masonic Temple, and on Friday evening the annual convocation of the college. Other outstanding features will be the exhibits. In addition to the commercial exhibits there will be a replica of the Lister exhibit at the Wellcome Museum of Natural History, London, including Lister's operating rooms and hospital wards. The Departments of Hospital Activities, of Literary Research and of Clinical Research of the college will also present exhibits. Among the foreign guests will be Sir John Bland

Sutton, England; J. M. Munro Kerr, Scotland; Gordon Craig, Australia; Gustaf E. Essen-Moller, Sweden; S. A. Gammeltoft, Denmark. The retiring president is W. W. Chipman, Montreal, and the president to be inaugurated, George David Stewart, New York. The Lister oration will be delivered by W. W. Keen, Philadelphia. The chairman of the Detroit Committee on Arrangements is Alexander W. Blain.

BOOKS

Heart and Athletics by Dr. Felix Deutsch and Dr. Emil Kauf, translated by Louis M. Warfield, M.D. Published by C. V. Mosby Co., St. Louis. Price $2.50.

The transalator says: "There is no single volume in the English language to which one can turn to find authorative opinions upon the influence of athletics upon the heart." The material upon which the researches were made was drawn from the "Heart Station" in Vienna where thousands of athletes were examined. It has been possible therefore for the authors to collect very definite data upon which to found their conclusions. Since the effects of various forms of athletics upon the heart have been demonstrated by measurements there can be no question as to the authoritative character of the work presented.

The Medical Clinics of North America (issued serially, one number every other month). Vol. II, Number 1, (Chicago Number—July 1927). Octavo of 294 pages with 26 illustrations. Per clinic year (July 1927 to May 1928). Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

Aneurysms of cerebral vessels is discussed by Pollock in the July number of the Medical Clinics. Senear presents a clinic in which are shown some varieties of skin diseases. Taub has for his subject pulmonary tuberculosis and diabetes and the treatment with artificial pneumothorax. Laing describes some migraine types in relation to the gastrointestinal tracts. Gatewood's contribution is on nephritis and alkalosis in duodenal ulcer. There is an article by Hutton on endocrine disorders as related to syndromes. Williamson and Birch have an article on hemophilia and present a genealogical chart. Abt gives some advice in regard to the examination of an infant with special consideration of abdominal palpation. There are numerous other articles no doubt just as interesting and important as the ones mentioned.

Diseases of the Eye, a manual by Charles H. May, M.D. Twelfth edition, revised. Published by William Wood and Company, New York. Price $4.00

This very well known and highly appreciated little textbook on the eye has been very thoroughly revised and brought up to date. Its conciseness recommends it particularly to the general practitioner who has occasion to treat diseases of the eye.

Overcoming Tuberculosis, by Gerald B. Webb, M.D., and Charles T. Ryder, M.D. Third edition revised. Published by Paul B. Hoeber, Inc., New York. Price $2.00.

This, the third edition of a little book formerly published under the title "Recovery Record," is written for the information and guidance of the patient with tuberculosis and contains a number of blank charts upon which he is supposed to keep a record of his temperature and pulse.

The Surgical Clinics of North America (issued serially, one number every other month). Vol. 7, number 3 (Chicago Number—June 1927). 330 pages with 81 illustrations. Per clinic year (February 1927 to December 1927). Paper, $12.00; Cloth, $16.00 net. Philadelphia and London; W. B. Saunders Company.

There seems to be an unusual number and variety of cases described in the June Surgical Clinics. Brain lesions and head injuries are presented by Bevan. In other clinics tumors, both malignant and benign, of many varieties are discussed. Koch presents a number of cases of skin grafting that are instructive. One of the very practical contriutions is on the subject of acute backache by Cox, and another by Cornell on the management of heart cases in pregnancy and labor. Ryerson has a clinic on ununited fractures. Eisendrath presents some postoperative complications in urology and Koll discusses a renal and ureteral calculi. O'Conor presents a series of cases of traumatic dislocation of the kidney. These are just a few of the subjects presented but they will perhaps give some idea of the scope of ground covered.

Lippincotts Pocket Formulary by George E. Rehberger, M.D. Published by J. B. Lippincott Co., Philadelphia.

This little book gives the names of diseases in alphabetical order and prescriptions that may be used in their treatment. When one has made a diagnosis then he may take this little book out of his pocket and copy a prescription or two. It is really quite up to date and the treatments suggested are those to be found in the latest text books and in the current literature, it even mentions the Minot-Murphy diet in pernicious anemia. In fact, it may prove

of considerable value to a good many competent practitioners.

American Illustrated Medical Dictionary. The terms used in Medicine, Surgery, Biology, Dentistry, Pharmacy, Chemistry, Nursing, Veterinary Medicine and kindred branches. Edited by W. A. Newman Dorland, M.D., Member Committee on Nomenclature and Classification of Diseases of American Medical Association, Fourteenth Edition, Revised and Enlarged. Octavo of 1388 pages, 319 illustrations, 107 in colors, Philadelphia and London: W. B. Saunders Company, 1927. Flexible binding, Plain, $7.00 net; Thumb Index, $7.50 net.

As long as advances continue to be made in medicine new words will be coined. Butas facts replace theories more and more words will become obsolete. A great many words are coined to express conditions that are not clearly understood. However, as long as new words are coined dictionaries will need to be frequently revised. Although it has been but two years since the last edition of Dorland was published, more than two thousand new words have been added. In addition to the new words the definitions of some of the old words have had to be changed.

This dictionary has been arranged for the greatest convenience of consultation and also for the conservation of space. Particular attention is given to pronunciation and a very simple method is used for expressing the sounds.

International Clinics, a quarterly of illustrated clinical lectures and especially prepared original articles, edited by Henry W. Cattell, M.D., with the collaboration of numerous others. Volume II, Thirty-seventh series, 1927. Published by J. B. Lippincott Co., Philadelphia.

The first article in this volume is on allergic diseases in relation to climate by W. Storm Van Leeuwen. Bishop presents a heart-block clinic. Clark discusses a neuropathic constitution. Robinson has a paper describing the causes and cure of bunions. Pack discusses anal and rectal neoplasms. Robertson discusses the social economic phase of heart disease. Montague has a paper on pruitus ani. A new feature of the clinics is presented under the head "Travel Clinics" in which are described some of the work in foreign hospitals. Another new feature is a medical questionnaire in which the editor gives detailed answers to questions sent in. There is an abundance of interesting and instructive matter in this book.

A Text Book of Pathology. By Alfred Stengel, M.D., Sc.D., Professor of Medicine, University of Pennsylvania, and Herbert Fox, M.D., Professor of Comparative Pathology, and Director of the Pepper Laboratory of Clinical Medicine, University of Pennsylvnia. Eighth Edition, Reset. Octavo of 1138 pages with 552 text illustrations, many in colors, and 18 colored plates. Philadelphi and London: W. B. Saunders Company, 1927. Cloth, $10.00 net.

There is no particular need for comment on a book that has come to an eighth edition except to say that it has again been carefully revised and such corrections made as were necessary to bring it up to date. This is one of the standard text books in medicine.

The Medical Clinics of North America, Heart number. May, 1927. Published by W. B. Saunders Co., Philadelphia.

The contributors to the heart number of the clinics are nearly all associated with the University of Pennsylvania School of Medicine. There is first an article by Stroud on the clinical value of the electrocardiograph, then an article by Eiman on the bundle of His and its relation to diseases of the heart, then Tolley tells us how to distinguish cardiac arhythmias at the bedside. McMillan discusses the value of the polygraph in cardiac diagnosis. Norris has a paper on acute endo-carditis and Wolferth gives the diagnostic signs of heart failure. Hughes discusses pericarditis. Sailer gives the diagnosis of aortic aneurysm. Anders has a very instructive article on angina pectoris. McCrae talks about the circulation in relation to surgery. Pendergrass calls attention to some very important points in x-ray examinations of the heart.

Then there is a paper on sickle cell anemia by Stanfield and Klauder, one on general paralysis of the insane by Wilson and Winkelman and one on indican by Saxon.

The New Medical Follies by Morris Fishbein, M.D., Editor of the Journal of the American Medical Association. Published by Boni and Liveright, New York.

There is no one better qualified to write about the cults, the medical fads and the pseudo-medical fads than is Dr. Fishbein. His position gives him opportunity to learn more of the facts about such things, and he is a fearless critic. When one begins to read this book he is sure to finish it. The author has no difficulty in saying what he wants to say and saying it so that there is no mistaking what he means. His conclusions and his criticisms are not haphazard, but are the results of careful and thorough investigation.

1926 Collected Papers of the Mayo Clinic and the Mayo Foundation, Rochester, Minnesota. Octavo of 1329 pages, with 386 illustrations. Phila-

delphia and London: W. B. Saunders Company, 1927. Cloth, $13.00 net.

Another volume of collected papers of the Mayo Clinic has recently been published. Only those papers that seemed to the editors to meet the interest of the general surgeon and diagnostician have been published in full, those of less general interest have been abstracted or published by title, giving the date and place of former publication. These collected papers have made available in convenient form a great deal of the more important current literature on scientific medicine.

Physical Diagnosis by Richard C. Cabot, M.D., Professor of Medicine in Harvard University. Ninth edition, revised. Published by William Wood and Company, New York. Price $5.00

In this revision a good many changes have been made, particularly in the chapter on cardio-vascular diseases. Other chapters have also been revised. One of the striking features of the book is the illustrations, a great many of which are made from photographs of patients, illustrating the various conditions under discussion. Throughout the text there is reflected the diagnostic acumen of its author.

Disorders of the Nose, Throat and Ear, by Aaron Roth, M.D. Published by Physicians and Surgeons Book Company, Brooklyn.

This book is written for laymen and the author has attempted to simplify the descriptions of the diseases of these organs for their understanding. He has presented the subects as well as they could be presented with that obect in view. Just why any physician hopes to teach the people how to diagnose and treat their own diseases is hard to understand. He cannot possibly impart to the people in one little book the knowledge and experience it has taken him many years to acquire. The effort is futile, the results are usually more harmful than beneficial.

Text Book of Bacteriology. By William W. Ford, M.D., Professor of Bacteriology, School of Hygiene and Public Health lecturer in Hygiene, School of Medicine, Johns Hopkins University. Octavo of 1069 pages with 186 illustrations. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, 8.50 net.

In this work the author has given accurate descriptions of all the micro-organisms ordinarily encountered in medicine. Considerable space is also given to bacteriologic technique, formulae for stains and the methods for using them, and all the other details of bacteriologic study. The subjects of infection and immunity are also discussed and the current opinions on these subjects are carefully presented.

The Human Body in Pictures by Jacob Sarnoff, M.D., published by Physicians and Surgeons Book Company, Brooklyn.

The author's idea seems to be to illustrate by films and moving anatomic pictures the anatomy of the body as it is usually taught to the pupils of public schools. Presumably the illustrations given are pictures of films that are to be used in connection with the text. They seem to be largely diagramatic, but if these illustrations are even fair reproductions the writer fails to see in what way a student would gain any real knowledge of anatomy from their reproduction.

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Clinical Congress of Physical Therapy and Sixth Annual Meeting American College of Physical Therapy.

The American College of Physical Therapy announces that plans have been completed for its 1927 Clinical Congress of Physical Therapy and 6th Annual Meeting, to be held at the Hotel Sherman, Chicago, October 31st to November 5th.

The program is extraordinary in character. The first three days are to be devoted to a school of instruction. For this purpose the country's most prominent clinicians and teachers have been selected and intensive fundamental and clinical training will be given. There will be one day of sectional meetings, the following distinct sections being represented: (1) Medicine, Diagnosis, Pediatrics and Endocrinology; (2) Surgery, Gynecology, Urology, Orthopedics; (3) Eye, Ear, Nose, Throat, Oral Surgery.

The fifth day of the Congress will be devoted to a Joint Session. Numerous special addresses by some of the foremost leaders in medicine will be offered. These will be of general interest to all whether in one specialty or another. The closing day will be given over to hospital and dispensary clinics.

Inasmuch as physical therapy has made such rapid strides in the past few years, a gathering such as this is of vital interest to every practitioner and specialist. The program in itself is attractive, but additional features in scientific and commercial exhibits, demonstration clinics, small group conferences, etc., will help to make this congress an unusual event.

Physicians in good standing in their county societies are eligible to attend as

are also technicians and doctor's assistants properly vouched for.

Those contemplating attendance are urged to enroll by mail as early as possible. The fee for the instruction classes is $10.00, payable by all, whether fellows of the college or not. Non-fellows of the college must pay in addition a registration fee to the assembly of $5.00. Send for program and information to Chairman, Convention Committee. American College of Physical Therapy, Suite 820-30 N. Michigan Ave., Chicago.

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To Prevent Rabies

It is no longer necessary to send patients to Pasteur institutes for antirabic inoculations. Rabies Vaccine (Cumming) P. D. & Co., is superior in potency to the Pasteur method and may be administered by the physician in the office or at the home with no more technic or difficulty than an ordinary hypodermic injection. There is no gradation of dose; all doses are alike.

We understand that Rabies Vaccine (Cumming) P. D. & Co., is made by the method devised by Dr. James G. Cumming. A one per cent suspension of rabic brain tissue (from rabbits dying of rabies inoculated by an injection of fixed virus) is dialized against running, distilled water until the inefectivity of the virus is destroyed.

The safety of the finished product is assured by injecting this material beneath the dura of rabbits, and subcutaneously in guinea pigs and mice. Sterility tests are also utilized to insure freedom from bacteria. The vaccine is standardized by weight so that 2 cubic centimeters of suspension, the contents of one of the syringe containers, contains sufficient material for one injection for an adult. The safety and efficiency of Rabies Vaccine (Cumming) P. D. & Co., has been amply demonstrated by its employment in a large series of cases.

Parke, Davis & Company offer a 24-page illustrated booklet "Rabies Vaccine, (Cumming)," to any physician on request.

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Hypodermoclysis—A Description of a New Apparatus

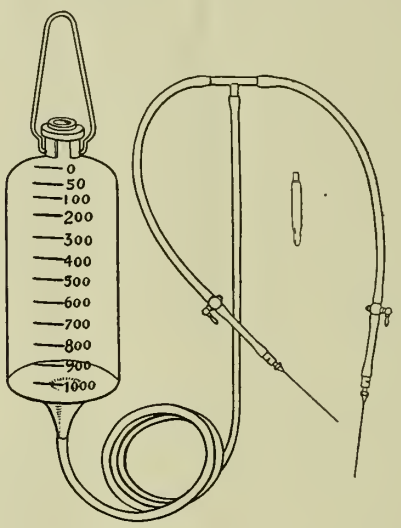
AUGUSTUS HARRIS, M.D., Brooklyn, N. Y.

Read before the Brooklyn Urological Society, April 12th, 1927.

The set herewith presented is simple, efficient and overcomes all the disadvantages of those hitherto employed. It is adapted to both subcutaneous and intravenous use; in fact, it may be used for intravenous salvarsan, glucose or citrate transfusions.

For intravenous work the writer has found the B-D Fordyce needles (assorted sizes) to be ideal. The principes outlined by Fantus in his "Technic of Medication" are a valuable and helpful guide in routine intravenous treatment.

The apparatus consists of a graduated Kelly infusion jar, with pointed end, 1,000 cc., the proper lengths of rubber tubing to make connection, two stopcocks, two Luer Lok adapters, two Yale needles 19 guage 2½ inches, one glass T tube and one glass observation tube. The rubber tubing is



made of good quality gum rubber to withstand repeated boiling, and is of standard, uniform quality, thickness and calibre, with a diameter of ¼ inch and lumen of ⅛ inch. A reserve supply of this tubing should be kept on hand to replace worn-out tubing. A short section of heavy rubber tubing is supplied for connection with ⅜ inch neck of gravity jar. The stopcocks should be attached as near the terminal ends of tubing as possible.

If the outfit is to be employed for intravenous work remove the T tube and replace with glass observation tube, using one terminal rubber connection with fittings. If Fordyce needle is used disconnect terminal Luer Lok adapter, and replace with Luer-slip made for Fordyce needle.

If one chooses to employ the Buckstein metal thermos container for keeping the solution warm, he may substitute this for the plain jar. In fact, the tubing is adapted for use with any type of container. An electric pad applied around the jar will also

help in keeping the solution warm. In intravenous infusions the rate of flow is not supposed to exceed 500 cc. in 10 minutes.

It is particularly recommended that all new rubber tubing, before being used for the first time, be soaked for six hours in normal sodium hydroxide solution, and then rinsed. As proven by Stokes & Busman[1] in experiments on dogs, arsphenamine solutions, as well as alkaline solutions, and transfusion media may become very toxic when new rubber tubing is used. This toxic agent is not destroyed by sterilization of the tubing, but disappears in repeated use of same. The toxic agent is removed promptly by soaking in hydrate solution as stated.

The simple, attractive features provided in this set make it indisensable to surgeon, internist and practitioner and eliminate frequent annoyance of poorly functioning apparatus.

The outfit is manufactured by Becton, Dickinson & Co., Rutherford, N. Y.

REFERENCES

1. Journal A.M.A., Vol. 74, No. XV, p. 1013, April 20, 1920

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A New Product

Horlick's Milk Modifier is now being introduced to the medical profession. This maltose and dextrine product, which is derived exclusively from malted grains, was first announced at the annual meeting of the American Medical Association in Washington, D.C., in June, and created much interest. Since that time it has been presented to convention gatherings in other parts of the country, and the Horlick representatives are now calling on individual members of the profession. It is presented and supplied to the profession along ethical lines. No feeding directions accompany the package. A statement on the wrapper is to the effect that the product is for prescription by physicians only.

In the June 18th issue of the Journal of the American Medical Association, under the heading of "New and Non-Official Remedies," the acceptance of the Horlick Milk Modifier was announced by the American Medical Association. The product differs from the malt sugars in that it incorporates soluble and readily assimable protein and valuable mineral salts from the grains. The Horlick firm points out this fact as a decided advantage for its product.

Another point which is mentioned as an advantage in favor of the new product is the proportion of its two chief carbohydrates, maltose and dextrin, which are 63 per cent maltose and 19.5 per cent dextrin.

Samples of the new product, literature concerning its use, prescription blanks and file cards giving methods of preparation are available for members of the medical profession and will be sent upon request.

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Postoperative pulmonary atelectasis is of more common occurrence than is usually thought. The majority of postoperative pulmonary conditions previously regarded as aspiration or postoperative pnumonia, bronchitis or bronchopneumonia, have been cases of atelectasis. Such is the conclusion reached by Mastics, Spittler and McNamee in an article published in the August number of the Archives of Surgery . They find that in atelectasis the signs of consolidation are present with a suppression of breath sounds and fremitus with retracted, immobile chest, associated with a displacement of the heart and mediastinal structures toward the affected side. If there are no complications there is an absence of toxicity. The diagnosis may be confirmed by x-ray examinations.

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From the curriculum of the modern medical school one might think it was intended to turn out finished doctors. That is one of the troubles with the medical profession now, there are too many doctors who seem to believe they were finished when they graduated. A man who boasted that he read more medicine than any other doctor in his community, graduated twenty years ago and has never read anything but the text books he used in college.

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Some recent experiments, recently reported, show that the urine of normal children in a recumbent position is alkaline but as soon as they assume an upright position it becomes acid. When in the recumbent position the urine is also larger in quantity and of lower specific gravity than when in the upright position. It was also shown that giving large quantities of water did not change the acid reaction in the standing position.

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Of the five forms of tubercle bacilli—human, bovine, avian, piscene and reptilian—but three of them are liable to affect man, we are told. The bovine type affects the skin, bones and mesenteric glands while, as a rule, pulmonary and laryngeal lesions are caused by the human type.

A New Tax Ruling

The compensation received by a medical director of a state or county hospital is no longer exempt from income taxes, under a ruling just announced by the Income Tax Department, according to M. L. Seidman, tax expert of Seidman & Seidman, Certified Public Accountants.

"Heretofore," Mr. Seidman explained, "the law used to be that a medical director in the position mentioned need not pay any income taxes on his compensation since he was a state employee or the employee of a subdivision of a state, and the salaries of such employees were exempt from tax. Under the 1926 law, the further requirement was added that the employment be in connection with an essential governmental function. It is now held by the Income Tax Department that operating a hospital is a proprietary rather than a governmental function, and hence the Department concludes that the compensation of a medical director is subject to tax under the present law.

"The probabilities are," Mr. Seidman added, "that this ruling will be contested, for there is a serious doubt whether conducting a hospital is purely proprietary. The contention may be made that the state wishes to safeguard life as well as property and maintaining a public hospital could therefore be regarded as an essential govmental function."

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To Former Illinois Doctors

Doctors who lived formerly in Illinois, or who are descendants of pioneer physicians of the "Illinois Country" will hear with interest that volume one of the "History of Medical Practice in the State of Illinois" is ready for delivery.

The History has been written under the supervision of a committee appointed by the Illinois State Medical Society as a commemmoration of its seventy-ffifth anniversary but more especially to make a living tribute to those valiant men of the medical profession who played so able a part in the exploration, settlement and development of the Illinois country.

In this first volume of the history are set down events from the earliest available knowledge of conditions in the Illinois country, along through the days of the Aborigines, and commencing with the actual records when, in 1673 Father Marquette had medical attention in Chicago, up until the year 1850.

In the second volume (now in preparation), narration continues up until the present time. Future years will bring other volumes so that this History will be an ever virile monument to the men and incidents whom it would honor.

Research for years resulted in an opulent supply of material from which to compile this History and has evidenced to an almost unbelievable degree the vital part played by physicians in every angle of the exploration, settlement and development of a country that is one of the richest and most influential sections of the richest country in the world.

It must be remembered that originally the Illinois country encompassed a territory far greater than the area now known as the State of Illinois, Wisconsin, Indiana, Missouri, Kentucky and Iowa, as well as what is now Illinois, and even some sections of Ohio fell into that primitive epitome of the Illinois country. In the southern part of the state it was well into the nineteenth century before Missouri and Illinois ever acknowledged the natural divorce of interests made by the Mississippi river. Because of this, naturally enough, close interest in this History extends to physicians or to their descendants in practically every State in the Mississippi valley or contiguous thereto.

Rare maps, unusual personal memorabilia and rare discretion in compilation, make this History of unique interest to doctors everywhere and to many laymen.

Volume one is new ready. Volume two will follow soon. Orders may be sent to Committee on Medical History, Illinois State Medical Society, Medical and Dental Arts Building, 185 North Wabash Avenue, Chicago, Illinois. Charles J. Whalen, M.D., Chairman.

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In an article on Asthma in Children by Murray Peshkin which appeared in the American Journal of Diseases of Children, June 1927, the statement is made that enlarged or diseased tonsils and adenoids do not operate as etiologic factors in asthma. On the other hand surgical intervention may initiate the onset and adversely affect the course of asthma. He further states that tonsillectomy performed before or after the onset of asthma for the relief of recurrent "head colds" proved to be of no value, because in a great majority of these patients the symptoms were an expression of protein sensitization.

Dr. H. G. Knight Appointed Chief of Bureau of Chemistry and Soils

Dr. Henry G. Knight, dean of the college of agriculture and director of the experiment station of the University of West Virginia, has been appointed chief of the new Bureau of Chemistry and Soils of the United States Department of Agriculture by Secretary W. M. Jardine. Doctor Knight is a man of broad training in chemistry, soils, and agronomy, and of extensive experience in directing research in these fields. He will assume his new duties about October 1.

Doctor Knight was born at Bennington, Kans., July 21, 1878. He received the degree of bachelor of arts from the University of Washington in 1902, and the degree of master of arts from the same institution in 1904. He was a fellow at the University of Chicago in 1903, and received the degree of doctor of philosophy from the University of Illinois in 1907. He was assistant chemist in the University of Washington in 1903 and 1904, professor of chemistry and State chemist of Washington 1904-10, and director of the Washington Agricultural Experiment Station 1910-18. He served as dean of the college of agriculture and director of the experiment station of the University of Oklahoma 1918-20. He was honorary fellow at Cornell University in 1921-22. In 1922 he was apointed to the positions in West Virginia which he now resigns to accept the appointment in the Department of Agriculture.

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The Prodigal says: "I think the American Medical Association at Washington, D. C., in May 1927, made a bad break when they resoluted for greater freedom to purvey whiskey. Such liberty would increase the number of bootleg doctors, who are considered an undesirable class of citizens. I saw the effect of such liberty granted to the profession in Kansas in the '80s in the beginning of prohibition in that state. The privilege was so abused that it was a travesty on the profession, and a disgrace and had to be corrected by legislation. The assumption that any man or set of men are to be the sole arbiters of any question of morals, physical or mental, is, to assume infallibility. Men are big children and like little children the only safe way to keep them, a part of the time in the right path, is by restraint.

In the '80s, a homeopath in Columbus, Kansas, was prosecuted for prescribing at one time for one patient, three gallons of whiskey and one case of beer. Dr. Kenney, a witty Irish physician, was a witness for the prosecution. He was asked by the prosecuting attorney the following question viz.'

'If three gallons of whiskey and one case of beer is a homeopathic dose of one patient, what would be an allopathic dose be?'

Answer: 'Your honor, it would take a distillery and a brewery to fill the prescription.'

The homeopaths and the eclectics did not do all the prescribing in those days."

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New Step in International Relations of Physicians

The cordial relations of the physicians of America, North and South, and their colleagues of the Old World, were further expressed by the appointment of American representatives to the editorial cabinet of Acta Dermato-Venereologica published under the direction of Dr. Johan Almkvist of Stockholm, Sweden. The nominees are: Howard Morrow of San Francisco, Howard Fox of New York, J. B. Shelmire of Dallas, D. R. Smith of Toronto, Pardo Castello of Havana, and Herman Goodman of New York.

The Acta Dermato-Venereologica publishes original contributions in French, German, or English within the fields of dermatology, urology, and social hygiene, and items of interest of persons or progress in these specialties.

American literary contributions should be addressed to Dr. Herman Goodman, 18 East 89th Street, New York City.

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Fatal pulmonary embolism occurred in six per cent of the surgical cases that came to necropsy at the Mayo Clinic, is the statement made by Henderson in the Archives of Surgery for August. It was observed that patients who die from pulmonary embolism are older than the average surgical patient and that they are overweight. It was also observed that as a group they have normal or somewhat subnormal blood pressures. Snell, reporting from the same clinic, concludes that pulmonary embolism following operation is a more common cause of death in obese patients than in average patients. It seems from the cases studied that there is greater susceptibility to pulmonary embolism in patients over fifty years of age who are overweight and have a subnormal blood pressure.

Control of Hypothyroidism by Thyroidectomy

The status of 100 patients from six months to six years after thyroidectomy performed for the relief of hyperthyroidism was ascertained by C. A. Elliott, Chicago (Journal A. M. A., Aug. 13, 1927). Seventy consider themselves perfectly well; thirty are conscious of some disability; all are carrying on their usual work. Forty-one show evidence of definite visceral injury as the result of previous hyperthyroidism. Of fourteen cases of exophthalmic goiter in which operation was performed within three months of the onset of symptoms, only one shows residual visceral damage. Four patients are considered to have persisting but not disabling hyperthyroidism insufficient to require operation. Five patients are definitely hypothyroid, and are benefited by thyroid extract. Laryngeal nerve injury occurred temporarily in six cases; in two the injury has persisted. Reoperation for thyroid remnants was necessary in six cases. Hyperthyroidism is a progressively harmful condition and should be controlled early before permanent tissue injury has occurred. Subtotal thyroidectomy early in the disease effectively controls hyperthyroidism, provided a sufficient amount of the gland has been removed. If hyperthyroidism continues after such an operatoin, too much thyroid substance has been permitted to remain. The preoperative administration of iodine seems equally effective, at least temporarily, in toxic adenomatous and in exophthalmic goiter. Thyroidectomy, even if performed late, after a prolonged period of hyperthyroidism, is a valuable procedure, enabling most patients to return to their previous occupations even though considerable residual injury may be evident.

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The announcement by Harington, in 1926, that thyroxin, instead of being a compound of tryptophan, is a teraiodo derivative of the p-hydroxyphenyl ether of tyrosine, has been followed by a determination of its constitution. Following this, Harington and Barger prepared synthetic thyroxin. This has been shown to be identical with natural thyroxin. Thus, the artificial production of a naturally occurring biologicil product, the active principle of the thyroid gland has been accomplished. (Jr. A.M.A., June 11, '27).

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The antirachitic substance, vitamin D, occurs in some fish oils—notably in cod liver oil—in egg yolk fat, and to a small extent in milk fat. As a rule the vegetable fats are not antirachitic. A few instances of undoubted potency in oils of plant origin have been ascribed to the effect of solar irradiation of the products incident to their commercial preparation. This is true of cocoanut oil prepared from sun-dried copra. Whereas the other vitamins appear to originate in the vegetable kingdom, this is not the case with vitamin D. Experiments carried out to learn the origin of vitamin D in the cod-fish, raise the question as to whether vitamin D cannot actually be synthesized by certain species. These experiments also revealed that the oils of the herring and sardine rival the cod in antirachitic potency. (Jr. A.M.A., June 4, '27).

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That cow's milk has a definite bactericidal action is the conclusion drawn by Jones and Little from their tests with nonhemolytic streptococcus. The milk inhibited the growth of the streptococcus for varying periods. The milk from some cows prevented growth for eight hours and that from others from four to six hours. Whey obtained by the action of sterile rennet solution inhibited the growth of the streptococcus practically as well as milk. They infer that the substance orignates in the udder. Their full report appeared in a recent number of the Journal of Experimental Medicine.

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What was formerly called salt fever, occuring in children is now known as protein fever since it can be produced by the administration of a diet of concentrated proteins or by urea or sodium chloride. The temperature may reach 104 and there is thirst, restlessness and a dry skin, but no other symptoms. All the symptoms are relieved promptly by large doses of water by mouth. The fever disappears with the beginning of free perspiration.

FOR SALE: A good practice in Central Kansas in the wheat belt, full equipment, all ready to go to work, reasonably priced for quick sale, 3,000 inhabitants, good opening.
B. E. Pennington, M.D.
Hoisington, Kansas.

WANTED—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

THE JOURNAL
of The
Kansas Medical Society

VOL. XXVII. TOPEKA, KANSAS, OCTOBER, 1927 No. 10

Nephritis and Nephrosis in Childhood.

GEO. E. PAYNE, M.D., Hutchinson

Read at sixty-first annual meeting of the Kansas Medical Society, at Hutchinson, May 3, 4, 5, 1927

The term nephrosis rather recently introduced into medical terminology has caused a good deal of confusion among most of us, as to just what this new disease might be. When a patient presented a conspicuous amount of albuminuria and a corresponding collection of casts, time honored custom resolved the therapeutic problem with omitting meat, purins and salt from the diet, and if the case did not respond, one had performed his duty nevertheless.

It is the purpose of this discussion to present the modern conception of two separate diseases gleaned from varied authentic sources, and to trace their evolution to logical conclusions, emphasizing their clinical and therapeutic parts. It is realized that only a few high points can be touched upon, considering the mass of work which has been done on the subject.

Since nephritis occurs in children in its simplest forms, and can be observed before the ravages of adult life change the purity of the lesions, this paper is limited to the disease developing in the above age period. Nephritis in children is classified as hemorrhagic or glomerular and parenchymatous or tubular. The latter has come to be designated as nephrosis; since rather recent observations have more definitely differentiated the two types of nephropathies.

It is well, first, to compare briefly their clinical course.

Acute hemorrhagic nephritis is well defined. It occurs suddenly, with sypmtoms of a severe general infection or toxemia, such as fever, headache, backache, prostration. There is pallor of the face or entire body surface, denoting a profound vascular change. Edema when present is slight. Early hematuria is a clinical characteristic. Severe cases terminate suddenly with acidosis, anuria or uremia. Mild cases recover in two or three weeks—others become chronic, resulting in permanent cardio-vascular changes, occasionally becoming, in the adult, the chronic hypertensions or nephritis. Recurrences are not uncommon and when present parallel evidence of reinfection. Nutritional disturbances follow the too restricted diet, and severe anemia may develop but is not a prominent finding in the early stages in spite of the hematuria and pallor. Eighty to ninety per cent of cases recover completely.

The striking picture is one of a self evident general infection, recurrences of the infection lead to exacerbation of the disease.

There are some important findings apart from the pure clinical picture. Blood pressure is always raised at some time, usually early. Albuminuria, though moderate, is not striking. Casts of all kinds may be present, but are not especially a differential finding. The N. P. N. of the blood is increased and when reaching over 100 mg. per c.c.—uremia is impending. The N. P. N. is, however, not the cause of uremia. The phthalein excretion test is lowered. There is evidence of a general vascular injury, especially of the capillaries. In the kidney, there are the well known glomerular lesions such as infarcts, thrombosis and degeneration. By examining the nail beds, under a low power lens, first placing a film of oil over the area, the capillary loops are seen as tortuous and thromboses are at times observed—the eye grounds present the same phenomena—severe cases developing retinitis.

It is generally recognized that the disease is caused by a streptococcus infection, usually of the tonsils. We now know that scarlet fever is a specific streptococcus infection and hemorrhagic nephritis is a not uncommon complication. It seems that the streptococcus toxin has a specific action on the vascular system, of which the kidney lesions are but a part. It is not definitely known whether their toxins alone, or the organisms themselves produce the changes. Septicemia is rarely observed, however.

The onset of nephrosis is insidious, the cause obscure. Pallor is marked, edema extreme, ascites and pleural effusions are common. Anemia is early and marked. The whole body is usually edematous. It is a shifting edema. Fever is moderate, more often absent. The urine is scanty, al-

buminuria predominates the urinary picture. Casts of all kinds are present. Microscopic blood cells may be found if searched for diligently. The urine is low in or free from chlorides. The blood proteins diminish from 1-2 to 1-3 the normal. The blood chlorides are low, often below the point for kidney excretion. The general tissue cells are high in chlorides and water content. True uremia does not occur but drowsiness and coma may develop from cerebral edema. Low grade peritonitis or other infection often terminates the picture.

Nutritional disturbances follow the enormous loss of body protein through the kidneys. The kidney lesions are tubular. The lower cells are frequently involved. Jaundice sometimes occurs. The phthalein test is usually normal. The non-protein nitrogen, urea of blood is normal. Increase of blood lipoids (cholesterol) is characteristic. Mild cases persist for years. The outlook is always grave. A few cases recover spontaneously. At autopsy the kidney lesions are compatible with life. The specific kidney functions are not primarily altered.

That the disease is a general one wherein the kidney lesions are only a part is quite evident. The general body metabolism may be lowered 20 per cent in the severe cases.

The evolution of the present conception of nephrosis began in 1905, when Muller first used the term to differentiate a degenerative kidney disease from an inflammatory lesion or nephritis. Then followed the recognition of lipemia or increase of blood cholesterol in cases of nephritis with edema and massive albuminuria, by Chaufford and Wiedal, in 1911. Then Epstein in an epoch series of papers from 1912 to 1920, popularized the word nephrosis to designate cases of nephritis characterized by albuminuria, reduction of the total plasma proteins, lipemia, normal blood urea and N. P. N. with no cardio-vascular changes but with generalized anasarca.

Such a differentiation was not generally accepted in the medical world until as late as 1924. Up to this time no definite progress was made concerning the etiology. In May, 1925, Claussen, at the St. Louis Children's Hospital, added some valuable information. In a series of cases observed during many months of careful study, the main etiological function seemed to be staphylococcus infection. Of 23 cases, in only three was infection not obvious and these were in moribund cases.

Six cases had frequent head colds before renal symptoms appeared and later sinus infections were verified. Nephrosis followed in one case of staphylococcus empyema, Staph. osteo-myelitis and third from an infected burn. Paranasal sinus infections were found in the remainder. His conclusions were as follows—

1. Sinus infection was invariably present in each of a series of unselected cases.
2. Exacerbation of the infection accompanied by exaggeration of the symptoms.
3. Successful treatment of the infection was followed by improvement or cure.
4. Other forms of treatment were of temporary benefit, only.
5. In other forms of nephritis, sinusitis is not regularly present.

That Staphylococcus infections especially of the sinuses play an important part in the cause of nephrosis is admitted. That it is the only cause is not admissable by many observers.

TREATMENT

One attack or the existence of acute hemorrhagic nephritis is sufficient indication for tonsillectomy. It should not be undertaken until hematuria ceases or the general symptoms appear to remain stationary. The treatment of the acute stage is largely a dietary and nursing problem. A milk diet reinforced with fruit juices and carbohydrates is the one of choice. Experience has shown that the proteins of vegetables are not well tolerated in the early stages, whereas those of milk more nearly conform, chemically, to body protein and the nitrogen excretion products are at a minimum. Liberal amounts of fluids are indicated even in the presence of edema. Experience shows that the cases do better probably for several reasons: 1, serving to dilute toxins excreted; 2, it diminishes the work of urinary concentration.

In most cases the diet is not increased fast enough to avoid nutritional disturbances. A decreasing hematuria and dropping of th blood N. P. N. are guides in dietary increase.

Practically, with a good urinary output and general appearance, hematuria is the important guide. These patients need iron, and vegetables are added as soon as indicated.

Too much protein may cause recurrence of hematuria, as does recurrent infection. The reducing of the urine alkalinity, periodically, seems to decrease hematuria—alkalosis should be borne in mind, with marked decrease in kidney function. No drugs are known which affect directly the

general or special lesions. Extreme purgation and sweating may do harm and are not generally indicated.

In the case of a nephrosis the treatment is in many respects just the reverse. It must first be directed in the line that nephrosis is a general disease. Search for nasal and sinus infections should be diligent and when found treated energetically. Anesthesia is not contra-indicated, especially gas-oxygen, in carrying out short operations, especially drainage of sinus infections.

Local antiseptics are indicated. Mercurochrome, 1%, instillations have been beneficial, 10% glucose solution as a nasal douch helps, on account of its hypertonic and non-irritating action, to drain head infections.

The diet must contain adequate protein to supply the loss sustained through the kidneys and to furnish enough for growth. Protein in itself relieves the edema. It has been observed that urea is one of our best diuretics. Sodium chloride should be limited only when the edema is massive.

Diuretin which is a purin derivative (Sodium theobromin acetate) is the diuretic of choice. The surface tension of the blood is raised by its action upon the salt and water equilibrium between the tissues of body cells and blood. Cerebral edema responds to 20% glucose solution, intravenously, when most other means fail.

CONCLUSION

I wish to submit a table including the important differential points of nephritis and nephrosis as used in the St. Louis Children's Hospital.

	Hemorrhagic	Parenchymatous
Etiology	Acute streptococcus infection; e.g. of tonsils.	Chr. staphylococcus infection. e. g. of nasal sinuses.
Pathology	General capillary injury. Glomerular lesions.	General parenchymatous tissue injury. Tubular lesions.
Onset	Abrupt	Gradual.
Edema	* not characteristic	**** characteristic.
Uremia	May be present.	Absent.
Urine	Albumin * to **** Blood **** Characteristic. Casts of all sorts.	Albumin **** Characteristic. Blood** Casts of all sorts.
Blood	N. P. N. elevated. Chlorides usually normal. Plasma protein unchanged. Surface tension normal. Rapid sedimentation of RBC. No lipemia.	N. P. N. not elevated. Chlorides usually low. Plasma protein low. Surface tension low. Normal sedimentation RBC. Lipemia often.
Blood Pressure	Elevated at some time.	Not elevated.
P. S. P.	Reduced excretion	No reduced excretion.
High Protein Feeding	Contraindicated. Exacerbation of symptoms.	Indicated. No exacerbation of symptoms.
Prognosis	Good in acute stage. Spontaneous recovery in 80-90%. Bad in chronic stage.	Good if focus of infection can be found and removed. No recovery otherwise.
Treatment	Circulatory rest. Low protein diet. Tonsillectomy.	Transfusion. High caloric high protein diet. Treatment of nasal sinuses.

Diphtheria Control in Kansas.

C. H. KINNAMAN, M.D., Topeka, Kansas
Epidemiologist, Kansas State Board of Health.

Read at sixty-first annual meeting of the Kansas Medical Society, at Hutchinson, May 3, 4, 5, 1927.

In presenting this paper for your consideration I lay no claims to originality, neither have I in mind the effort to give you something new. You are all thoroughly conversant with the subject of diphtheria but my thought has been that you and I have something in common—namely, the eradication of diphtheria.

We all know this disease is essentially a disease of early childhood, and to a less extent of early adult life. It is always a serious malady and frequently kills, maims or cripples its victims—chiefly little children. Its onset is insidious; there is no alarming rash such as is seen in smallpox or scarlet fever to indicate the malignancy of the disease. There is ordinarily no prostration at the beginning, such as is seen in pneumonia, to indicate the seriousness of the infection.

There were more than ten thousand deaths from diphtheria in the United States last year. Ninety per cent of these deaths occurred among children under five years of age.

For each 100 cases reported in Kansas during the past five years eight deaths occurred.

There are no records showing the number of the cripples and the physically

handicapped among those who recovered; but we are privileged to make the deduction that they at least equalled the number of deaths.

For centuries diphtheria had been a self-limited disease, the treatment of which was symptomatic; but immediately upon the discovery of the causative organism by Klebs and Loeffler in 1884, there began a concerted effort to develop some specific neutralizing or immunizing agent for its control.

Six years later Behring and Kitasato succeeded in developing an antitoxin.

Five years subsequently, in 1895, this antitoxin had become standardized and its use in medical practice begun.

The death rate from diphtheria began to drop but the prevalence of the disease still continued. Diphtheria antitoxin is a curative agent—as an immunizer it has a very limited field.

In 1903 Park of New York began the use of a combination of diphtheria toxin and antitoxin in the immunization of horses for the production of diphtheria antitoxin. Ten years later Behring of Berlin attempted to immunize human beings against this disease with toxin-antitoxin. In 1914 toxin-antitoxin was standardized and its practical application to a large group of children was begun by Park and Zingher of New York City.

Notwithstanding the fact that a curative agent for diphtheria has been in use for thirty odd years, and an immunizing agent for the past thirteen years, this disease still continues to reap its harvest in many localities.

The question often asked is, if we have a sure preventive, "Why does diphtheria still persist?" We may well ask the same question regarding small pox for which we have had a sure preventive in vaccination for the past 200 years, but still due to public indifference, inadequate laws and blind and stupid opposition, we average in Kansas, for the period since toxin-antitoxin was discovered, 2,422 cases of smallpox each year. The medical profession as well as the laity is partially responsible for this condition of affairs.

At the conference of the State and Provincial Health Authorities of North America, held in the spring of 1926, "The Seymour Plan" for a campaign against diphtheria during September and October, 1926; small pox during November and December, 1926, and typhoid fever during January and February, 1927, was adopted.

The co-operation of all health agencies —The American Medical Association and other organizations—was secured, and an intensive campaign to educate the public to the fact that diphtheria, smallpox and typhoid fever are communicable and preventable was planned.

An intensive program was inaugurated early last fall for the eradication of diphtheria by many State health departments—"No Diphtheria by 1930" being the slogan

The Kansas State Board of Health, as you well know, has always during the past twenty years been wide awake—in preventive work on diphtheria we were early in the race.

In the years of 1920, 1921 and 1922, the State of Kansas had the most severe epidemics of diphtheria in the history of the State: 16,346 cases were reported with a mortality of 923 persons.

During these years the Division of Communicable Diseases had no funds available to furnish toxin-antitoxin free to communities for demonstration purposes. The funds available for free antitoxin for indigent cases were also exhausted.

In Wabaunsee County during the winter of 1921 and 1922, the disease being epidemic in this county, the Commissioners agreed to furnish the toxin-antitoxin if the different school districts would arrange for physicians to administer the treatment—approximately 2,500 children were immunized under this plan in the county.

Result: For a five year period seven cases were reported with no deaths—4 adults and 3 childrn of pre-school age.

Ottawa County, Franklin County, the city of Topeka and Parsons also immunized a number of children in 1922. These are the first records of any number of children receiving the treatment in Kansas.

A conservative estimate of the number of children immunized each year follows:

1922	10,000
1923	1,000
1924	10,000
1925	8,000
1926	38,109
1927 to date	15,000
Total	82,109

The diphtheria records for the same year are as follows:

Year	Cases	Deaths
1922	4089	288
1923	2625	151
1924	1707	88
1925	1101	71
1926	903	49
1927 to date	275	11

During the past 25 years no downward tendency has been observed to any degree each year until 1922. What is the reason for this continuous downward trend in Kansas?

In my opinion there are six reasons as follows:

First: The establishment of full time county health units in the state.

Second: Culturing of schools and removal of carriers where epidemics occur.

Third: Medical inspection of school children and correction of remedial defects of the nose and throat. The more corrections the less number of persistent carriers in the community.

Fourth: Change in the quarantine laws on cases and carriers.

Fifth:Education of the public in preventive measures.

Sixth: Immunization of children with toxin-antitoxin.

The above reasons were not actively stressed until 1922, when all these measures were brought to bear in numerous counties of the state. The counties show the results of these activities by their low morbidity rate, while inactive counties do not give the lowered case incidence.

An analysis of the six reasons show:

First: That full time county units were first established in Kansas in the year of 1920. Physical examination of school children is a routine measure in these counties each year. Statistics on these full time counties show a decreased incidence of diphtheria following the correction of nose and throat defects, as a result of the parents being notified by the Health Officer of these defects, and advising that the parents consult their family physician regarding the proper correction.

Second: Culturing of school children and removal of carriers when the disease is epidemic in a school.

Whenever a severe epidemic has occurred in the past six years among school children and the pupils have been cultured, the diphtheria epidemic was immediately controlled. This culturing of school children has shown that in every epidemic there are children with throat and nose defects who remain positive for long periods of time, and medicinal treatment has no effect on the children becoming negative to the diphtheria organisms. Surgical treatment for the removal of the tonsils and adenoids is the only procedure to render this child safe to return to the school room.

A recent illustration of the dangers of persistent carriers during epidemics occurred in the fall of 1926 at Coffeyville, Kansas. Ten cases of diphtheria were reported from this city from August 21 to October 2nd, inclusive. On October 12th, 9 cases were reported. For the week ending October 19th, 7 cases were reported. On October 22nd, in conference with the mayor, school authorities and physicians, the State Epidemiologist made arrangements for the culturing of the school population of the city. Twenty-four additional cases were reported before the culturing of all schools was completed. No cases were reported from a school after culture.

Sixty-three children positive for diphtheria organisms were found during these examinations. Seventy-five per cent of these carriers showed diseased conditions of the nose and throat.

From November 20th to December 9th no new cases developed.

Our present law requires that all persons found to be carriers of diphtheria organisms remain under quarantine for a minimum period of fourteen days before cultures can be taken; and further requires two successive negative cultures taken at 48-hour intervals for their release from quarantine.

Three of the original children found positive on first culture were declared to be negative and returned to school in the Whittier building about December 4th. Six new cases were reported from this building among school children, onset about December 9th. Immediate re-culture of the pupils of this school resulted in 25 pupils being found to be positive for diphtheria organisms.

In the Seventh grade 14 out of the 18 children present were positive for diphtheria organisms. Three of these positives were the children who had been removed originally as carriers and who returned to school a few days previous. Four cases of diphtheria were absent from this room at the time of culture, two recovered and two died. Two other cases occurred in other rooms.

On November 1st immunization of the children of Coffeyville was started by the physicians of Coffeyville, at a complimentary price of $1.50 for the complete treatment. Three thousand children were immunized with toxin-antitoxin between November 1st and December 31st, 1926. Sixteen corrections were made among this carrier group. The last carrier to be re-

turned to school was a boy who was positive from November 2nd to February 1st. Every member of this boy's family were positive for diphtheria organisms at intervals during his period of quarantine. This boy was immunized with toxin-antitoxin early in November.

That remedial defects of the nose and throat are factors in the control of diphtheria, has been noted by other State health authorities. I quote the following extract from a recent issue of the Connecticut Weekly Health Bulletin.

Eighteen diphtheria carriers have been found recently in a Connecticut town by cultures taken among school children, on account of the presence of diphtheria in the school. In reporting these carriers, the health officer makes the following comment:

"Ten of these 18 cases reported were carriers one year ago. I find a pathological condition in either nose or throat such as enlarged tonsils, adenoids or deflected septum or other nasal osbtruction."

This is in accord with what has long been known concerning diphtheria carriers, namely that persons who are carriers often have some diseased condition of the nose or throat that may favor the growth there of diphtheria germs. It appears that about the only effective treatment for the diphtheria carrier state is treatment directed to clearing up any diseased conditions that may be found in the nose or throat. From the information furnished by this local health officer it would appear worth while to provide proper treatment for a diseased condition of the nose or throat of any child who becomes a diphtheria carrier, in order that such child may not be so likely to become a carrier again at a later date.

From January 1st, 1927, to date, 8 cases of diphtheria have occurred in Coffeyville. None of these persons had ever received the toxin-antitoxin immunization treatment. Two children were age 8, one age 12, the other 5 cases occurred in adults.

Third: Medical inspection of school children is being carried out in most of the larger cities of the state and also in a number of rural districts; and during the past 6 years a large number of physical defects among the school population have been corrected through the efforts of the city and county nurses. This lessens the persistent carrier population in these communities and influences the case incidence of diphtheria.

Fourth: The quarantine regulations were changed in 1922 fixing the minimum quarantine period, on cases and carriers, as 16 days.

Fifth and Sixth: Education of the public in Kansas to the value of toxin-antitoxin as a preventive measure has been extensively carried on by newspaper articles; pamphlets; moving pictures; insurance companies (advertisements); articles in periodicals, reaching both the urban and rural population; and by countywide demonstrations by health officers and physicians co-operating in immunization campaigns.

Twenty-two county medical societies have co-operated with the State Board of Health in putting on these complimentary campaigns to educate the parents to the value of this safe and sure preventive.

Summing up the diphtheria situation for the first three months of this year, our records show a slight improvement over the preceding year.

From January 1st, 1926, to March 31st, 1926, there were reported 243 cases with 14 deaths. The same period for the year 1927 shows that 229 cases were reported with 11 deaths.

If the physicians of Kansas will get behind a movement to advise all parents to have their babies immunized as soon as they are six months of age and bottle fed babies before they are six months of age, we will stamp diphtheria in children out of Kansas.

I believe every child before he is allowed to attend the public schools should bring his certificate of immunization against diphtheria and smallpox. This would prevent much sickness and many deaths, with an economic saving that cannot be estimated.

1877—Then and Now—1927.

F. M. WILEY, M.D., Fredonia

Read before the Wilson County Society, June 17, 1927.

In 1877 Fredonia was a frontier town boasting a population of 700, and was the metropolis and county seat of Wilson county, within whose borders lived 8,000 people, less than a dozen of whom had been here ten years. Most of these seven hundred had accomplished the last leg of their journey from eastern homes in Ohio, Indiana, Illinois and Iowa, and, in some instances, farther east, by stage coach from the nearest railway stations at Humboldt or Chanute. Some had come by covered wagons

drawn in many cases by ox teams and conveying their limited household equipment. They were an intelligent and industrious people and had shown fine judgment in the selection of a site for the town that was soon to be known far and near as the "City Beautiful" for its situation at the base of the twin mounds. To avoid controversy I will explain that some months before the present town site of Fredonia was established, two abortive attempts were made to start towns near by. One, on the east slope of the west mound, was called Syracuse; the other, located one-half mile north of the present northwest corner of Fredonia, was named Twin Mounds, but it was learned that the name had been pre-empted by another Kansas town and the two or three box houses were pulled into Fredonia to swell the importance of that center of population. From an esthetic standpoint the mounds continued to be Fredonia's chief, if not her only asset, until one day about April 1st, 1877, when the stage coach drawn by four horses swept down from Humboldt, via Buffalo, and deposited at the National Hotel, which stood where the post office is now located, a strange, rather timid young man. The young man, who answered in a startled manner when called "Doctor," was quiet enough, but the sensation following the arrival of the stage that day was caused by a very shiny, conspicuous stovepipe hat by which he was crowned. I speak of that hat now lest I forget to mention it later, and it deserves mention for it is the one thing that made a lasting impression on my mind that day when I was introduced to the business life of the city that was to be my home for many years. At night I found I had just $3.00 and the following morning saw my total cash assets invested in a comfortable hat. District Court sat the first of May and the judge bravely wore the only other silk hat I saw in Fredonia for a number of years. Judge Talcott and I became warm friends.

The south and west sides of the public square were filled up with cheaply constructed one-story business buildings with high square fronts adorned with box car lettered signs which were easily read if not especially artistic. The National Hotel at the northwest corner was a two-story building with a wooden awning and a commodious combination office and bar. The Dexter livery barn, or as the large sidewalk sign proclaimed, "Hotel de Horse," occupied considerable space about the middle of the north side of the square, and was owned and operated for many years by my respected father, James Wiley. The public square, of which we are all at this time so proud, was then a treeless, unenclosed jungle of weeds, crossed in a hap-hazard way by a number of well-worn paths and frequented by town cows. It was a rendezvous for the canine population and a free camping place for immigrants passing through. A two-story stone building occupied the northeast corner of the square, and this, I believe, is the only building on the square which has survived. It served as a printing office and was the home of the Fredonia Journal, edited by W. A. Peffer. The court house was a two-story frame building standing on the east side about where the present city hall is located. In 1879 it was removed to the center of the public square and treated to a coat of white paint and served its purpose until replaced by our present fine court house in 1886. The battle of ballots over the location of the county seat was not considered finally ended until that time.

Not being rushed with business I spent a good part of several days in getting acquainted with the town and its people and will give you some of the results of my observations, with an apology for the use of the first person, singular. I received a cordial greeting at the office of the Wilson County Citizen and a friendship with its talented editor, Mr. John S. Gilmore, was begun which continued to the end of Mr. Gilmore's life, and was the source of much pleasure and profit to me. Here I also met Mr. Wm. D. Christman, a gifted young editorial writer and printer of the Citizen force, with whom I was destined to have very intimate relations. The spiritual life of the community was promoted by three churches — Methodist, Congregationalist and Christian, and its spirituous requirements were supplied by an equal number of saloons. The saloons operated six days of the week and the churches, as places of worship, only one, though they were frequently used for other purposes in the interest of the public welfare. The relations between the saloons and churches were never cordial, and became more and more strained as time passed. The preachers of that day were sturdy and able and thoroughly orthodox and inadequately supported by voluntary contributions of the citizens. Rev. D. T. Summerville, pastor of the Methodist church, promptly welcomed me into its fellowship. Financially the saloons had much the better of it and the

license fees they gladly paid to the city constituted its chief source of revenue.

Of course Fredonia had no paved streets and when the spring rains came, heavily loaded wagons were frequently mired to a standstill on our most exclusive avenues. The board sidewalks around the square (which were the only walks of any kind in the city) were made of one-inch native lumber, which in the process of seasoning became loosened and made precarious footing resulting in broken legs and other serious injuries. There were few bridges in the county and after a good rain mails were sometimes delayed several days until the streams became fordable. The tri-weekly mail coming by stage coach from Humboldt was eagerly awaited by an impatient crowd at the post office. Life was not very exciting. The literary society met every week at the Methodist church and the best oratorical and musical talent of the city performed to large and enthusiastic audiences. Coal oil lamps furnished illumination but no one considered it in any sense unsatisfactory. There were no industries except a small brick plant on Salt creek where soft brick could be had for building chimneys, and later a few brick residences were erected. There were a few wells of good water on the town site, one of which, under the big elm still standing at the southwest corner of the square, was free to the public for the refreshment of men and horses. Jonathan Edwards and, afterwards, A. Pearson, delivered water to citizens not otherwise provided for, at the modest charge of 50c per barrel. There being no ice, this method of providing water for family use would not be considered healthful or agreeable in comparison with our present luxurious water service, but no one of our stout hearted pioneer settlers complained, and there were no serious epidemics.

Consider a few of the luxuries we did not enjoy in 1877—ice, bath tubs, oranges, oysters, grape fruit, bananas, safety razors, gas, electricity, filling stations, telephones, sidewalks, movies, railroads, and the numerous appliances which in later years gas and electricity made possible and which became necessities to our domestic and civic enjoyment. The predominance of young people was very noticeable; young professional men were eager to establish themselves where their talents and industry would presumably be more promptly recognized and more liberally rewarded than in older communities. The legal profession was ably represented by the firm of Kirkpatrick & Burge; T. J. Hudson; W. A. Peffer; B. M. Short; C. C. Chase and Chas. Sweeney. Three of these, S. S. Kirkpatrick, T. J. Hudson and W. A. Peffer, afterward represented Wilson county in the United States Congress. Sweeney was a victim to strong drink and dishonest in his business relations and made a complete failure. C. C. Chase was a brilliant and promising attorney, but also fell into dissolute habits and became a wanderer. J. A. Burge was successful in his chosen profession, always genial and public spirited, and is the only surviving member of the bar as it existed in the pioneer period.

I have spoken of saloons. Perhaps I should explain. Saloons were stores, but they differed in some material ways from other stores. In the first place they were patronized only by men . If a woman came in the clerk did not come forward to meet her, he simply stood and stared and waited for her to start something for he knew she had not come to buy anything. It was still more rare for a child to enter one of these three stores, and if the man sold a child any of his goods he would have to pay a fine. Some men did not patronize the saloons. The men who were most regular in their patronage were not very prosperous looking as a rule, and it was a singular fact that the more they patronized them the more untidy they became. These stores sold only one thing, and it was called booze. There were several kinds of booze, but I think the two most common kinds were called whiskey and beer. The saloons were the first stores that sold only for cash. The men who ran the saloons were not very popular. They did not run the churches or lodges or clubs, and I do not remember one being mayor though a man might own the building where a saloon was and do all these things. Saloon keepers, as they were called, were always ready to do one kindness for laboring men. These men received their checks Saturday night when the banks were closed, so they would go to one of the saloons and the kind man there would cash their checks, then the laboring man would buy some booze and drink it, then he would buy booze for all the laboring men who happened to be there and all the loafers, too, till sometimes the kind man had all his money back. Then the laboring man went home, but I will not describe what occurred there. Some of these homes were very unhappy, and many years ago the good women of Fredonia de-

cided to make these men stop selling booze. Now they think they should have done so long before they did. The erstwhile saloon keepers are now selling town lots in Florida and five acre farms among the sand dunes of our Mexican border.

The desire to keep within the limits of the time allowed me compels the omission of much that I recall with pleasure, and I will pass on to the consideration of the subject that we, as physicians, are most interested in—the one the gentlemen probably had in mind when they assigned my subject, "Then and Now."

In referring to the pioneer medicine men of Wilson county, I shall avail myself of the early files of the Wilson County Citizen and Jno. S. Gilmore's valuable History of Wilson County, Kansas, and go back not fifty but sixty years. In the year 1866 Dr. R. B. Wetmore graduated at Rush Medical College at Chicago and in the fall of that year located at Coyville. In the first years of his practice he rode over the counties of Woodson, Wilson, Elk and Greenwood in response to professional calls. He was the first of whom I find any record in Wilson county. He served as postmaster at Coyville and in 1880 was elected a county commissioner.

Dr. Allen McCartney came to Neodesha in 1867 and built a log cabin at the foot of Little Bear Mound. He served as government physician to the Osages, became skilled in their language and was universally respected by the tribe. He was a member of the original town company of Neodesha, was active in politics, and in 1867 was elected representative and served one term in the legislature.

Dr. Thos. Blakeslee graduated at Rush in 1870 and came at once to Wilson county, locating at Neodesha. He served three years in the Civil War and saw active service in many major battles along the Mississippi under Grant. Like Dr. McCartney he was a member of the first council of Neodesha and he aided in formulating the first government of the town. For twelve years he was pension examiner prior to the organization of county pension boards; served as register of deeds of Wilson county, and under the administrations of Presidents Harrison and McKinley was Collector of Internal Revenue. No man in Wilson county has stood higher socially or professionally than Dr. Blakeslee.

Dr. M. A. Duncan came to Wilson county in 1885, locating at Buxton where he performed the arduous duties of a pioneer doctor, and fully maintained the high ideals of the physicians of the county for a period of fifteen years. Since 1900 he has been a resident of Chanute, where he continues in active practice.

Dr. J. J. Barrett was the first doctor to locate in Fredonia. It would be more accurate to say he located Fredonia. In 1868 he erected the first building on the corner where the Citizens Bank now stands, in which he successfully conducted a well equipped drug store for a number of years. Dr. Barrett was a man of striking appearance and personality, and was popular with the scattering early settlers of Fall River valley, not only in Wilson county, but also in Elk and Greenwood counties as far as Eureka, at which place he was located before coming to Fredonia.

Dr. F. T. Allen came to Neodesha early in its history and to the end of his life, in 1919, he fulfilled every obligation of a good citizen and faithful physician. He was a man of strong convictions and unfaltering courage, yet sympathetic and tender in his ministrations to the afflicted, and his memory is cherished by a host of grateful friends.

Dr. T. F. C. Dodd came to Wilson county in 1870 and located at Altoona, where he served his generation well and faithfully and was honored and respected for his unusual interest in the welfare of the community as well as his fine professional attainments. He was possessed of a wide range of general knowledge and was a most fluent and interesting conversationalist.

These brief biographical references may not seem as interesting to some of you as they are to me, but even if so I can not forbear giving a little more than a bare mention of one more of these noble men who gave themselves so freely and unselfishly to the work of building the fine civilization which we inherit. In my memory Dr. J. R. Willits stands as the "noblest Roman of them all." This cultured gentleman and accomplished physician came to Wilson county in 1871 and located at the county seat. In his knowledge of the curative properties of drugs he was not excelled by any physician in Wilson county of his day or probably of any subsequent time. He was very attentive to his patients and his presence inspired confidence. His assistance was widely sought in consultation and his manner toward physicians with whom he consulted was ethical, kind and considerate. Especially was this true of his relations to physicians of less experience than he. He

enjoyed considerable prestige as a surgeon as a result of his service in the army during the Civil War. He was well versed in anatomy and was successful in the diagnosis and treatment of fractures and dislocations. He was an admirer of Austin Flint, who was an adept in physical diagnosis, and a disciple of S. D. Gross, who produced a work on surgery greater than any that has been brought out by a single American author of any time. Dr. Willits was a reader, familiar with his country's history, and interested in the progress of the community. He took great delight in his family of four intelligent sons and when death claimed two of them in a brief time he became embittered and despondent, gave up his activities and after a few years of retirement and protest, died a broken-hearted man. I have a warm place in my memory for Dr. Willits.

These are some of the physicians of Wilson county with whom I was associated in the beginning. There were others but at this time I must omit further personal mention beyond a mere enumeration of some whose association I found helpful and agreeable. This should include T. B. Woodard of Neodesha; L. L. Jones of Altoona; J. S. Lebo, J. A. Rife and T. L. Craig of Guilford; A. G. Marshman and B. E. Jones of Buffalo; J. Y. Simpson of Coyville; and A. W. Cormack, E. J. Burch, C. A. Thomas and A. N. Perkins of Fredonia. I also recall Doctors Wellman,, Birney and Zatawska of Fredonia; Lemmon, Somers, Alexander and R. B. Campfield of Buffalo; and three rather unique characters who divided their time between farming and practicing medicine. They studied nature and, it was said, gathered roots and herbs with which to combat the prevailing diseases which were mostly malarial, though they were familiar with the use of quinine, calomel, rhubarb and podophyllin. They were modestly confident, pleasant men to meet and performed useful service. They were "Pegleg" Halstead of the timbered hills, Wm. Brown of upper Rainbow, and Jno. S. Black of Ox-Bow Bend, who later moved to Virgil, and whose son, Guy Black, is a successful physician of Emporia, Kansas. J. S. Black has been entirely blind for several months and is now living in a sanitarium. With all these gentlemen my relations were very cordial, and association with them resulted in an appreciable and progressive, if not very rapid accretion of professional knowledge, which I am more free to admit now than I was then. These men were mutually helpful, and there was no disposition to pretend to have secret or exclusive equipment or resources. I am proud to say this has been true of the Wilson county medical profession always, and never more than today.

These men were a fine company and, as physicians, many of them were fully abreast of the times, coming from high grade colleges. They exercised a potent influence in community affairs, holding various county and state offices as a public duty and at a sacrifice to themselves. They were the true family physicians who, according to some medical authorities, are doomed to become extinct very soon. They had time to be gracious and kind to their patients, and really helpful. By the process of immigration, in 1877 the land had been taken up and the few hundreds of dollars each immigrant brought along from his eastern home was expended. Farming had not become very remunerative, money was scarce. Doctor's fees were small and many of the people, discovering they were generous and philanthropic, humored them by postponing payment of their bills indefinitely. There was much sickness. When neighbor met neighbor and inquired about the health of his family he expected to hear some particulars for he assumed some of them were sick. I speak now of the fall of 1877, which, however, did not differ greatly from other falls. The people had malaria. I wish I had time to tell you about the ague for I think you of the present generation know nothing about it: and the numberless sure-cures that had no effect. The doctor would frequently be absent from home twenty-four hours and there were no telephones with which he could keep in touch with his base. Going up the river he prescribed for several patients and returning in the evening he dropped in to see if he were getting expected results. He was doctor, druggist, nurse, all-round dispenser of health and good cheer, and often of the common necessities of life. Trying situations arose and he met them single-handed. There were no specialists to relieve him of responsibility. Somtimes bad roads made it impossible to get any help and the old or young country doctor functioned as an anesthetist, obstetrician and surgeon, and occassionally completed the ceremony by giving the new mother her first lesson in baby culture and the baby its first bath. Trained nurses were unknown, there being no training schools west of Chicago. Clinical ther-

mometers and hypodermics were looked upon as unnecessary and the new doctor who produced one was doing so for advertising purposes. Doctors prided themselves on being able to make diagnoses without the use of so many instruments, and it must be said they came to a degree of skill by the use of their unaided senses that would be a surprise to the average doctor of 1927. In the case of a grave abdominal condition exclusion was practiced, also induction, then the doctor arrived at an opinion which, so far as he was concerned, became a conviction, and his self-satisfaction was touching when his diagnosis was confirmed as it usually was—at the autopsy. Antisepsis was the advanced point of progress in surgery around which discussion revolved. Lister was its advocate and carbolic acid and iodine its agents. Asepsis was a word that had just been coined, but though it was the bright star of hope for afflicted humanity and the foundation of modern surgery, its light was still feeble and it was nearly ten years later that its radiance came to be appreciated and its wonderful revolutionary effects realized. Laboratories as an aid to diagnosis were unknown, the x-ray had not been dreamed of, the great cavities of the body had only been invaded by the boldest surgeons. Laparotomies had a fatality of 65 per cent and were unknown to Wilson county practice. The appendix had not made its debut as a member of society whose removal under the reign of asepsis was to save many thousands of lives. I recall an operation which, while not unusual at the time, will be interesting at least to the physicians present, and will serve to illustrate surgical methods at the close of the ancient regime, methods which were in vogue during my college days. I believe besides Starling there was at that time but one other college (Long Island Medical College) operated under the same roof with a hospital, and for this reason these schools claim the distinction of being pioneers in modern clinical instruction. I saw a few abdominal operations, but not appendectomies. The prospect of an abdominal operation was the occasion for assembling the faculty and a selected number of advanced students in the operating room. Dr. Dunlap, a pioneer in laparotomy, who had a record of 108 operations with a fatality of 65, on one occasion came from Springfield, Ohio, to Starling at Columbus, to assist Dr. J. A. Poole, the professor of surgery, in the removal of a large ovarian cyst. Dr. Poole made the incision, explored the cyst, and said there seemed to be some unexpected adhesions. He then invited anyone who cared to to put his hand in and explore the adhesions. A number of gentlemen accepted the invitation, made the examination and afterwards washed their hands. No one considered such a procedure dangerous. Ligatures for tying blood vessels were made as a part of the preparation for the operation in the usual way by three internes or nurses. A thread of fine silk reaching across the room was held by two of the internes while the third applied beeswax to it, and it was then twisted and while being held in the middle the two ends were dropped to the floor and it became a long two-ply ligature which was then cut into proper lengths, and the assistant operator drew a number of them through the button hole of his coat so they would be handy when needed. Operating gowns were unknown. Surgeons operated in their customary clothing, but owing to the magnitude of this operation Dr. Poole departed from his usual practice to the extent of wearing a rubber apron. It was a matter of pride for a surgeon to do an operation without soiling his cuffs or any part of his clothing. Sea sponges were used which were simply washed and put aside to be used again. This operation was successfully completed. It was Dr. Poole's first laparotomy and was a brilliant success. I have often wondered what was the fate of the patient.

I assume you have all been in operating rooms of modern hospitals and it wil not be necessary for me to describe them in order to illustrate the contrast between then and now. The case I have related seems incredible, but the change was not accomplished in a day. What is called modern technique came to prevail in the hospitals very rapidly, but hospitals were not so common, and much surgery was done in homes, often under the trees and under circumstances which made perfect asepsis impossible, and it has taken a long time to learn the lesson of surgical cleanliness, the one lesson which, more than any other, has increased the span of human life and the sum of human happiness. The last quarter of the 19th century was a period of marvelous advance in the knowledge of the bacterial causes of infection. In rapid succession were defined specific germs causing many human diseases, such as tuberculosis, cholera, erysipelas, tetanus, pneumonia, malaria, typhoid fever and cerebrospinal meningitis. Pasteur's inoculation

against hydrophobia and similar measures against diphtheria and typhoid fever now save thousands of lives. It has been truly said that doctors are the only men who are striving to destroy their own business and commit professional suicide.

But I must stop romancing and get back to earth in Fredonia and Wilson county. There have been many changes in the ranks of the Wilson county medical profession since the period I have described. A prince among those who have come and gone was Dr. W. H. McConnell of Lafontaine. He gave 35 years of faithful service to his community and passed to his reward August 18, 1921. He was a modest, cultured gentleman, and a physician of rare attainments, endowed with a sublime sense of honor, kindly and sympathetic. His memory is cherished with sincere affection by the people whom he served, and honored by his associates in the profession. Dr. M. E. McCray, whose death May 7, 1927, was a real calamity to New Albany and the surrounding community, had practiced at that place since 1885. For many years he was a sufferer with disease of the eyes which resulted in almost complete blindness, but he continued his work with a degree of cheerfulness and a feeling of success that cheered his friends and that aided no little in neutralizing the disadvantages under which he was placed.

At the present time, the Wilson County Medical Society has seventeen members, as follows: A. C. Flack, E. C. Duncan, W. H. Young and F. M. Wiley of Fredonia; O. D. Sharp, J. L. Morehead, Jno. W. McGuire, B. P. Smith, C. L. Randall, A. P. Williams and Thos. Blakeslee of Neodesha; W. H. Addington and M. L. Somers of Altoona; B. R. Riley of Benedict; J. C. Preston and C. H. Dewey of Buffalo and Geo. W. Farrar of Fall River. I think there is not a member of this society but has more medical books and more office equipment than all the doctors in Wilson county together possessed in 1877. There is not a rural county in Kansas that maintains a better medical society than Wilson county considered either from the standpoint of the efficiency and equipment of its members, or the regularity and success of its meetings. I am proud of my membership in the Wilson County Medical Society, and I make grateful asknowledgement of the unfailing friendship and helpfulness of these, my associates. In all the years I have felt each doctor was my personal friend. If I had any doubts they could not exist after the kindness I have been shown tonight.

Just a few words remain to be said in conclusion. Long ago the stage coach went and steam cars came in. It almost seems the steam cars have reached, if indeed they have not passed, the peak of their usefulness and are giving way to the automobile, which has already replaced the horse on the city streets and will replace it on the farm. . A covered wagon attracts more attention than an airplane. Our grandchildren will remember hearing grandfather say he would never trust himself in a flying machine. The telephone and wireless and the domestic and industrial uses of electricity are products of the last fifty years. Women vote, the law allows it. Men have no right to drink, the constitution forbids it. We used to talk of millions and hardly believed in their reality. Now one man's income exceeds two millions per week and Henry Ford pays forty millions per year in income tax. We now talk of billions, and are creditors to Europe to the amount of eleven billions. We shall probably never get the money, but why worry?

I have tried to give you, though it has been in a rambling way, some description of the "Then and Now" of Fredonia, and of the practice of medicine locally and generally. It remains to record the changes a half century have produced in myself. I think it will not require many words.

In 1877 I was young and handsome; in 1927 I am no longer young. Then I had a wealth of glossy hair; now a limited number of silver threads adorn my otherwise arid dome. Then I possessed thirty-one teeth of some of which I had unkind, not to say unholy, thoughts; now I have thirty-two, all sound and beautiful. Then I boasted of keen vision; now I appreciate my friend, the optician. Then I was quite certain; now I may be mistaken. Then, among my visions of the future was a very vague one of a wife and home; now the complete and happy realization of that vision is incomparably the greatest joy of my life, and its fruits are the love and confidence of a rather numerous posterity, who in their generation will witness greater wonders than I have seen and fulfill a greater destiny as the years unfold.

———R———

It is reported that a clergyman in California strained a muscle while preaching and applied to the industrial council of the state for compensation.

Otitis Media in Infancy

L. M. CALLAWAY, M.D., Kansas City, Mo.

Read before the Jackson County Medical Society, February 15, 1927.

Otitis media in the first two years of life is a very obscure disease. Lack of symptoms, physical findings and helplessness of the patient, combine to make the diagnosis difficult.

OCCURRENCE AND ETIOLOGY

The occurrence of otitis in infancy is favored by certain anatomical conditions peculiar to this age, namely:

1. A short and wide Eustachian tube which opens well back into the naso-pharynx.

2. The mucous membrane of the middle ear is of more embryonic character and less resistant to infection.

3. The tympanic cavity in the first few weeks of life is filled with a gelatinous mucus. This mucus along with foreign matter, such as milk which may pass into the ear through the Eustachian tube, makes a suitable culture media in which purulent infection may thrive, and also helps to clog the middle ear when infection is established.

The recumbent position in which bottle babies are usually fed is condusive to the entrance of foreign matter and infection to the middle ear from the pharynx.

Acute infections such as influenza, naso-pharyngitis, sinusitis, measles, pneumonia, whooping cough, scarlet fever, diphtheria and gastro-enteritis, in which crying, sneezing, coughing and vomiting are present may lead to early infection of the middle ear by way of the Eustachian tube. Children born to syphilitic, tuberculous, alcoholic parents and those with any kind of malnutrition are more prone to otitis. Adenoid vegetations and tonsillar infections are sources of otitis especially in the second year of infancy.[1]

Gomperz[2] maintains that influenza is the most frequent cause of otitis in infants, with measles and whooping cough next in frequency; it is less often met with in diphtheria, chicken-pox and scarlet fever.[3] Smith[4] reports the occurrence of ear infections in 613 sick babies in the Harriet Lane Home of Baltimore, as follows: 33 per cent either had middle ear disease on admission or developed it within four days after admission. The month of February furnished the largest number with a percentage of 47, and July, the fewest number with a per centage of 23. Infants from 3 to 15 months of age showed the highest susceptibility. More than half of those with otitis were in this group. Pneumonia, dysentry, nasal diphtheria, whooping cough and pyelitis showed a complicating otitis in 50 per cent of the cases. Hemolytic streptococci were found in 50 per cent of cultures taken from the ear discharges. Contrary to expectations pneumococci were found infrequently. The frequency in which streptococci were found, he concludes, otitis in infancy should be considered quite a contagious disease.

SYMPTOMS

Babies with acute otitis accompanied by high fever present the general appearance of being extremely sick. Restlessness, stupor and expiratory grunt are often present. Temperatures will range from 100° to 106°. An acute catarrhal ear may show a temperature of 100 to 101°, and when inflammatory occlusion of the Eustachian tube takes place, with empyema of the tympanic cavity a continuous high fever is the rule. Periodic spontaneous discharge of pus through the Eustachian tube may account for a temporary remission. Pain is manifested by crying and restlessness. Crying when attempting to nurse should suggest tubotympanic inflammation. Crying when laid on the affected ear; when pulling the ear, or palpating around the ear, are signs more often noticed after the third or fourth month. Crying without apparent cause suggests otitis. Lack of attention to spoken words is sometimes announced by the mother, indicating deafness.

The observer should examine carefully for slight congestion of the pharynx and tonsils and increased nasal discharge.

Symptoms of brain irritation, as convulsions, unconsciousness and contraction of the neck muscles, must be regarded as severe symptoms, but will very often abate, as if by magic, after myringotomy or spontaneous rupture of the ear drum.

Edema in the post-auricular angle, in front of the tragus or along the side of the neck and jaw, may be observed, indicating the infection has ruptured into the soft tissues. The mastoid antrum in infancy freely communicates with the upper tympanic space and its lateral wall is very thin diploic bone and in many instances shows less resistance to purulent infection than the ear drum.

There is a great possibility of overlooking an ear inflammation in infancy when associated with pneumonia, pyelitis, acute

naso-pharyngitis, sinusitis and acute adenitis, in which there is about the same range of temperature.

Gastro-intestinal derangement manifested by vomiting and diarrhoea is to be expected in acute infantile otitis. Malnutrition often accompanies low grade infections of the middle ear. Such manifestations as these lead to error in diagnosis with treatment directed to a result instead of a cause; sepsis and toxemia allowed to progress with a violent tympanic empyema present, unobserved.

OTOSCOPIC EXAMINATION

It is not an easy matter to get a good view of an infants ear drum. White scales of exfoliated epithelium and cerumen often obstruct the canal. Instillation of peroxide followed by irrigation with normal salt solution will usually clear the obstruction. Ear specula in sets of 3 to 5, from ½ to 4 mm in diameter is a necessary equipment. Either the electric otoscope or speck light, to illuminate the ear canal, is indispensable in bedside work. The infantile ear canal gets gradually smaller to very near the drum, and for this reason it is necessary to press the speculum well in for a good view of the membrane.

The drum membrane may show slight changes with considerable significance. Hyperemia along the margin of the drum and along the handle of the malleus is a usual finding with acute catarrhal otitis; this slight hyperemia in the presence of high fever should suggest empyema. Distinct redness with bulging is certain evidence of empyema. Yellow tinged translucency is significant of empyema.

Vesicles on the surface of the drum are seen in influenzal otitis. Multiple pin point perforations in the presence of serous discharge suggest tubercular otitis. Wart-like conical protuberances are sometimes observed as points of rupture in purulent otitis, granulations at these points take on the appearance of polyps and are often seen in the posterior-superior aspect of the drum. Sagging of the posterior-superior aspect of the external auditory canal suggests rupture from the mastoid antrum into the soft tissues.

GASTRO-INTESTINAL DERANGEMENTS

Otitis with gastro-intestinal disturbances deserves special comment. This is, without doubt, the most hazardous ear disease complex associated with the age of infancy.

In 1894, Hartman[5] published definite conclusions about this condition as follows:

1. Otitis media in infants, may be accompanied by disturbances of nutrition as dyspepsia and emaciation.

2. Upon evacuation of the contents of the middle ear, the disturbances of digestion disappear, and increase in weight follows.

3. Elevation of temperature in the course of intestinal disturbances may be referred to a complicating otitis.

4. In all intestinal infections in infants accompanied by elevation of temperature and reduction in weight, an otoscopic examination for the presence of an otitis should not be neglected.

Marriott[6] recently claims the infantile mastoid becomes shut off from the tympanic cavity; the occurrence of this is due to the redundant mucosa of the middle ear swelling sufficiently in the presence of infection to close the aditus ad antrum. This may be present without edema, redness or apparent tenderness over the mastoid region. He says sagging of the posterior-superior wall is a positive sign of pus in the mastoid antrum. He estimates that 75 per cent of the watery diarrheas occurring in the cooler months are to be attributed to infections in the ear and mastoid. Severe diarrheas usually go with hemolytic streptococcic infections; milder diarrheas, with staphlococcic infections. A low grade infection of the ear may be manifested by a gradual loss of weight in the presence of plenty of food taken. He recommends opening the mastoid antrum for aural drainage as soon as the diagnosis can be made. Jeans and Floyd[7] report a number of cases which have recovered following early opening of the mastoid antrum, and in a few instances of acute diarrheas, the primary infections have been localized in the maxillary sinuses. Recovery was obtained with intranasal medication. One recovered promptly following adenoidectomy.

MENINGEAL INFECTIONS

In regard to meningeal infection with otitis in infancy, Southby[8] makes a report on fifty autopsies in infants and children where death resulted from acute disease. Thirty-three of this number were in the first two years of life. Of the latter number twenty-three had infected ears and ten, perfectly clean ears. Of the twenty-three infants with otitis, nine had an accompanying meningitis. Of the ten infants in which clean ears were demonstrated, four had a meningitis; 31 per cent had meningitis associated with otitis, 40 per cent had meningitis without an accompanying otitis. In only one instance was there evidence

that infection had extended directly from the ear to the meninges. He further states that in only four instances did they even suspicion ear trouble before death. This report shows how often an otitis is present in infancy without signs or symptoms referable to the ear, and shows how infrequently meningitis occurs directly as an extension from an acute otitis at this age.

TREATMENT

If otoscopic examination reveals only an acute catarrhal otitis we can usually relieve the condition by instillation of warm 10 per cent phenol-glycerin into the external canal for the otalgia; and instillation of 1 per cent camphor menthol in albolene or 5 per cent argyrol solution into each nostril, three or four times a day, for the nasopharyngitis. Aspirin may be given in sufficient dosage for temperature and restlessness.

If an empyema is found present, myringotomy is the urgent procedure. This can be done without fear of permanent injury to the organ of hearing. Recovery is hastened by the establishment of good aural drainage. Early healing of the drum is enhanced. The external ear canal should be kept clean by wiping the secretions away with cotton wool applicators or syringing with boric acid solution three or four times a day. Sterile gauze wicks applied into the external canal down to the perforation in the drum is ideal treatment when carried out two or three times a day by competent hands. Most purulent infections of the ear will recover by this routine. In spite of early treatment subperiosteal abscess will occur over the mastoid antrum which will require external opening of the antrum for proper drainage.

Adenoid and tonsillar obstructions should be removed to prevent recurring otitis.

Acute otitis with diarrhoea and dehydration should be treated by external antrotomy without delay. Drainage by myringotomy is not successful in many instances. This may be due, first, to occlusion of the aditus by a swollen mucosa; second, a general dehydration with lack of reaction to infection, and third, to the presence of a sero-gelatinous plug in the tympanum which may be present in the first few weeks of life. Antrotomy is a simple and safe procedure and is essentially a life saving measure. This operation can be done on extremely sick patients with local anesthesia where general anesthesia would not be safe.

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Toxic Effects of Therapeutic Doses of Barbital—Diethylbarbituric Acid

A. C. EITSEN, M.D., Hillsboro, Kansas

The effects of barbital in excessive doses have been well emphasized recently by Sands[1], Leake and Ware[2] and others; but, the American literature at least, yields little on the deleterious effects of therapeutic doses. In fact the statement has been made that "acute intoxication never results from ingestion of therapeutic doses."[3] Hence a few cases may be worth reporting.

Mr. G. W., 84, was seen because of rheumatic pains and sleeplessness. History and examination revealed nothing of note. His physical condition was very good for his age. He was given several five-grain (0.324 gm.) tablets of barbital, two of which he took a few nights later. The next morning I was called and found him mentally completely disoriented, as to time, place and persons. For several days he was decidedly maniacal. The condition took nearly a month to clear up.

At first I hesitated to attribute the condition entirely to the drug until I met my friend, Dr. Kaiser, of this town, to whom I related the experience. He was much interested and told me that he had had practically the same experience a year or two before with the same patient except that he cleared up more promptly.

The incident led to a trial before probate court as to the patient's ability to look after his own affairs.

Mrs. C. J., 66, suffered from an acute bronchitis, non-specific cervicitis from old lacerations and prolapse of the uterus and a light diabetes. She did not sleep well so she was given five grains (0.324 gm.) of barbital one evening. She slept fairly well but the next morning she was completely mentally disoriented. She attempted to get out of bed repeatedly. The condition cleared up in about three days.

Mrs. A. V., 83, suffered from a marked general pruritis (repeated examinations of gall bladder and urine were negative) with some senile changes and sleeplessness. Other sedatives were unsatisfactory so barbital was given. She took five grains on several occasions with good sleep during the night following but always for a part of or the whole day after she had muscular inco-ordination, especially in the lower limbs, so that she was unable to walk.

Muscular inco-ordination was noted in several other patients after the use of barbital.

CONCLUSIONS

1. The use of barbital even in therapeutic doses is not entirely devoid of danger and toxic effects are not as rare as ordinarily thought to be.

2. All dangerous effects seen were in old persons (past 60).

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UNIVERSITY OF KANSAS CLINICS

Clinic of Frederick B. Campbell, M.D.

Department of Obstetrics

RECTAL EXAMINATIONS DURING LABOR

The rectal examination during labor is now an accepted procedure in obstetric practice. It has earned this place for the following reasons: there is no vaginal contamination; the examination can be made by the nurse or the interne, thereby saving the obstetrician many hours of useless waiting; the advance made by the presenting part can be accurately noted, and at times the size of the cervix can be made out. However, it is especially easy to misjudge the amount of the dilatation and the thickness of the cervix. I have had a new interne tell me the amount of cervical dilatation and the position in a case where I was in doubt, but such diagnostic acumen usually deserts one during the first year of practice.

From the viewpoint of the proctologist there are certain dangers arising from the abuse or misuse of rectal examinations during labor, which should be made known by those having authority to make such examinations.

It is perhaps superfluous to mention that for the comfort of the patient the number of examinations should be as few as possible, and made as gently as possible with a well lubricated glove. A poorly lubricated glove may be very irritating to the sensitive tissues at the ano-rectal line. It is easy for a nurse, in her eagerness to keep the doctor posted, to make too many examinations for the good of the patient. When the patient complains that the rectum is sore from examinations there is no question about there being too many. Thrombosis may be encouraged in an external hemorrhoid, which otherwise might have escaped. Except under supervision, for training purposes, rectal examinations should only be made by experienced nurses who are able to form some opinion of the progress of the case from other observations.

A rectal examination is never pleasant, and it is doubly distasteful at a time when, through instinct, the patient would rather not be disturbed.

A woman just operated upon for ischio-rectal abscess dates her trouble from her confinement six months ago. She states, "I have had some protrusion for five years but never any pain until all those rectal examinations with the last confinement." It is possible that the infection started at that time.

With a history of protrusion and bleeding following stool, whether from hemorrhoids or a prolapsed mucous membrane, rectal examinations should be as few as possible. If there is pain and sphincteric spasm, they are contraindicated, except for diagnosis of the rectal condition. Uncomplicated hemorrhoids cause no acute pain or spasm, but the stage is set for certain complications such as infection, strangulation, thrombosis or a combination of these, which are always accompanied by acute pain and sphincteric spasm.

There is a physiological magnification of rectal pathology during pregnancy. The rectal tissues share to a certain extent in the congestion and softening incident to pregnancy, and obstruction from the weight of the gravid uterus increases any tendency to varicosity of the hemorrhoidal veins. Bleeding indicates a break in the mucous membrane and a little added trauma may force bacteria below the surface at this point. A low grade infection may be set up which will cause the hemorrhoidal condition to become so progressive as to require operation at a future time.

Suspected placenta praevia should receive as much respect from rectal as from vaginal examinations, so far as hemorrhage is concerned.

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DOES IT SUIT YOU?

It is doubtful if an ideal law has ever been enacted because most of our legislation is compromise legislation. In a body of legislators unanimity on any subject is hardly possible, and where there are many differences of opinion an agreement can be reached only by compromise.

The Basic Science Act is not an ideal law, but under the conditions now existing in this and many other states, it meets our requirements more fully than any other law that has been proposed. It will afford the protection against a further addition to the incompetent practitioners in the state that the people are entitled to and it will put all those admitted to practice after its passage upon an equal footing.

There are one or two points upon which there may be some difference of opinion, in the profession and in the legislature, and these should be carefully considered before the next session of the legislature. The bill, as it was introduced in the last legislature, provides that the Board of Examiners should be composed of the Chancellor of the University, the President of the Agricultural College and the Presidents of the three teachers colleges. A similar bill was passed in Minnesota last April, but that bill provided that the Board of Examiners should be composed of five members, two to be full time paid professors, or associate or assistant professors not actively engaged in the practice of healing, who shall be appointed from the University of Minnesota or any university or college in Minnesota accredited by the University of Minnesota, one physician and surgeon, one osteopath and one chiropractor.

There are numerous objections to such a composition of an examining board. In the first place the administration of the law should not be in the hands of the medical profession nor any of the cults, nor should any of these be represented on the board. When our medical practice act was passed the Regulars, Homeopaths and Eclectics were represented on the board of examiners, later the Osteopaths, since they were not represented on the board, demanded a separate board and got it; still later the Chiropractors, not being represented on either one, demanded also a separate board and it was granted them. And under the present conditions every new cult that comes into existence will demand and receive another law and a separate board of examiners. It is also to be expecter that if physicians and surgeons, osteopaths and chiropractors are represented on the examining board for the basic sciences, every new cult that springs up will demand representation on that board. Since the medical men on the faculty of the medical school are exponents of scientific medicine, the appointment of any number of these as members of the board will give color to the objection made by the cults and their friends that the board is dominated by one group of those to whom the law applies. No objection of this kind will stand in case the board is constituted as proposed in our bill.

There is no particular reason for requiring five members on this board, it could just as well be composed of three—the Chancellor of the University, the President of the Agricultural College and the Presi-

dent of one of the teachers colleges, to be chosen by the Governor.

This suggests a possible objection that may be raised by those who are most concerned with the political advantages of proposed legislation. In the composition of the board of examiners as provided by our bill there will be nothing added to the political patronage of the party in power. We are most concerned with the efficient administration of the law when it has been passed, but it will be found that in the legislature there are those who will consider only its political advantages.

The bill, as it was submitted to the last legislature, is being reprinted in another part of this number of the Journal. Every member of the Society is urged to read it carefully and those who have any criticisms to offer or any suggestions for improvement to make, are requested to send them to the Journal. A full and free discussion from our various viewpoints may clear the atmosphere for the concerted effort to be made for the passage of a satisfactory law.

FREE CLINICS

At the 1926 annual meeting of the Society held in Kansas City the following resolution was adopted.

"Resolved, by the House of Delegates of the Kansas Medical Society, that any member of this Society shall be regarded as unethical, who organizes, conducts or participates in the operation of a free clinic which is not under the continuous approval and supervision of the County Medical Society having jurisdiction where the clinic exists."

There were no exceptions made because it was the general opinion that any free clinic that had any real justification for existence would have no difficulty in getting the approval of the county society. However some of the county societies have ignored this resolution and so have some of those directing the operation of certain free clinics. This resolution was introduced because certain complaints had been made as to the manner in which some of these free clinics were conducted, and the complications which developed in the relations between the family physicians and their patients as a result of these clinics.

Where no objections and no complaints have been made by the members of a county society there is apparently no particular reason for taking any action in the matter, unless it might be to avoid future complaints or future complications; but those whose vision includes the interest of the medical profession as a whole, it is of the greatest importance that the county society should supervise and control all medical activities in its jurisdiction, for only in that way will it maintain the prestige to which it is entitled.

Free clinics have evidently not yet reached a sufficient degree of popularity in this state to make them obnoxious to the profession, but in some other states they have become an incubus that the profession cannot easily unload.

In New York there are numerous voluntary health agencies that interfere more or less in the regular practice of medicine. The New York State Journal of Medicine offered the following suggestions for harmonizing the relations between the medical organization and these voluntary health agencies:

It is fully recognized that County Medical Societies and county and other local voluntary health agencies are fully autonomous, and that no direction nor control over them can be exercised by statewide organization. In order, however, that the results indicated above, as being desirable, may be as fully secured as possible, it is belived that certain suggestions may appropriately be submitted for consideration to local health agencies and medical societies, action on their part of course being strictly optional.

It is believed that effective relations in the public interest will be promoted if voluntary health agencies on their part will

include the following steps in their program:

(a) Invite the County Medical Society to designate a certain number of its members, say two, to become members ex-officio of its board of directors or executive committee, if there be one.

(b) Lay its annual program of activities before the County Medical Society for information and suggestions.

(c) Appoint a special committee to confer with a similar special committee appointed by the County Medical Society about matters that come up from time to time in which both groups are mutually interested.

(d) Report to the parent body of the voluntary health agency any matter as to which an accord has not been reached with the County Medical Society, in the hope that through conference between the parent body of the voluntary health agency and the State Medical Society any such matter may be negotiated and adjusted to the mutual satisfaction of all concerned.

(e) Conduct at least one open meeting each year to which the members of the County Medical Society are specially invited.

It is believed that these desireable results will also be furthered if the County Medical Society will include the following in its program:

(a) Accept the invitation from the voluntary health agency to designate certain of its members to serve as members ex-officio on the board of directors or executive committee of the voluntary health agency.

(b) Study and consider any program of activities that may be referred to it by the voluntary health agency for information and suggestions; and, if such program is approved, make a public statement to that effect, and otherwise support the program so approved.

(c) Appoint a special committee on public relations to confer from time to time with similar committees appointed by the voluntary health agency on matters of mutual interest to both agencies.

(d) Report to the State Medical Society any matter as to which an accord has not been reached with the voluntary health agency, in the hope that through conference between the State Medical Society and the parent body of the voluntary health agency any such matter may be negotiated and adjusted to the mutual satisfaction of all concerned.

It is hardly likely that in Montana the free clinic has as yet intruded to any great extent, but the profession there seems to have already taken decisive action if we may judge by the following article by E. G. Balsam, M.D.:

"The members of the Yellowstone Valley Medical Society have always donated services examining children at the clinics arranged by the various welfare organizations. From the experience gained in such activities, they have made the following deductions—that the parents are very slow to avail themselves of the advice given, hence the children derive little benefit from all the work done at the clinics; after the advice is given by the doctor at the clinic the child may be taken to the family physician who may not have the same idea for the child, which gives rise to confusion in the minds of the parents and the child. For these reasons the members believe that, instead of having clinics for the examination of children, it is best to have the children taken to the family physician who will gladly do the examining and fill in the blanks required by the organizations.

"The organizations can have their meetings just the same and try to educate the parents and children in the value of periodic medical examinations of the apparently healthy by their family physicians and we believe do more good than is at present accomplished. The school or county nurse can also devote her time to the same end. There is nothing in a clinic or any other arrangement that will take the place of the active and friendly interest combined with the knowledge and skill of a family physician, for the members of a

family who have confidence and trust in him. That is individual service contrasted to the wholesale, hurried hurrah so frequently encountered at clinics."

WHERE WILL IT GO?

The following is extracted from an article that appeared in the Topeka Capital October 4, concerning a bequest made in the will of the late H. A. Rice of Hill City, Kansas:

"Chancellor E. H. Lindley of the University of Kansas and William A. Smith, attorney general, decided after a conference that the University could accept the bequest of about $100,000 for the purpose of endowing a chair at the University. It also was decided to fight the suit brought by the heirs of the deceased to break the will.

"Under the terms of the will Rice left his estate, valued at more than $200,000, to four educational institutions. There was $10,000 to the Graham county rural high school at Hill City; $10,000 to the Atchison county high school at Effingham; and the balance to be divided equally between Kansas University at Lawrence and Kansas Wesleyan university at Salina. These schools were to establish departments teaching the curing of diseases without drugs, and especially to educate against the use of habit forming drugs.

"The will further provided that in case either the university or Kansas Wesleyan, or both refused to accept the terms of the will, a sanatarium and health education center should be established at Topeka with the money.

"A casual reading of the will gave the idea that the university would have to accept the proposition of healing and curing diseases without 'use of drugs internally applied,' and if this were done, it was feared the university might have to abandon its medical school to be consistent—and also might lose out with the medical societies.

"But the chancellor and Smith have decided that the terms of the will merely bind the schools to educate against habit forming drugs, and that the $100,000 bequest is well worth trying to hold."

The profession will no doubt be quite a little interested in the plans formulated to carry out the provisions of this bequest. To endow a chair to "educate against habit forming drugs" seems entirely inadequate. At any rate the use of habit forming drugs is now so controlled by Federal laws and regulations that a department in a university devoted to education along this line seems somewhat out of date.

If the conditions mentioned in the article quoted are the only ones in the will, it certainly does seem that the logical disposition of this bequest would be in the establishment of a physiotherapy department in the medical school.

CHIPS

Some men make fools of themselves trying to be wise.

It is said the new microscope invented by a British scientist enables the looker to count the pulse beats of the microbe.

The average stay of a patient in the hospital has been cut down from six weeks to two. But the report gives three plausible reasons for the saving of time. The first one is that formerly the hospital was the last resort, whereas now it is the first resort. Again more minor injuries and brief ailments are treated in the hospital than there were twenty-five years ago. And last but not least, two weeks in a hospital usually breaks the patient financially and he is shown the open door.

Bacteriologists have found that there are more than one hundred varieties of streptococci existing on the mucous membranes of the body and that as many as ten or more varieties may be found in one individual.

Sir Thomas Horder, in an article on Diet and Dietists published in the London Lancet, July 16, 1927, says: "We are told that gastric ulcer and chronic diseases of the stomach tend to cancer of this organ. The evidence points entirely the other way. The chronic dyspeptic, whether his or her trouble be peptic ulcer, or dilatation, or

gastritis, only develops cancer in relatively few instances; whereas cancer of the stomach, arising without any history of previous dyspepsia, is a very common disease."

In a letter just received concerning the virtues of Jenny Wren self-rising flour, the writer said: "We believe that before long all leading drug stores will handle Jenny Wren as well as all grocers." There is no doubt at all that they will soon be using it in their pies and cakes, and that small sacks of it will be displayed along with the fishing tackle, silk hose, garden tools, underwear, etc., in the drug store windows.

The effects of the sickness insurance system in England upon the medical profession are beginning to be seriously felt if one may judge by some of the discussions on the "Encroachment Upon Private Practice" at the annual meeting of the British Medical Association. One of the speakers said: The medical profession was skidding on a very slippery slope at the bottom of which there was nothing but a cemetery in which would be buried all that made the profession worth while. The only thing that could arise from that cemetery was the spectre of a whole-time state medical service, which would take all the humanity out of the profession and leave instead an icicle wrapped up in red tape called an inspector.

In the April number of the Japan Medical World, Koan Takata described a treatment of late stages of tuberculosis by injecting the cavities with a mixture of iodoform, oil of turpentine, carbolic acid, camphor and olive oil. The injection is made through the wall of the chest after locating the cavity. He has not attempted injection of any but the apical cavities. He summarizes the results in rather indefinite terms, but states that the cavity becomes gradually smaller, the continued fever disappears, the number of tubercle bacilli in the sputum is decreased, the amount of sputum and the odor are diminished, and it has a marked hemostatic effect on hemoptysis.

Pericardiotomy offers the best if not the only successful treatment for purulent pericarditis according to conclusions drawn from the literature and their own experience, by Winslow and Shipley in the Archives of Surgery for September. They stress the points that purulent pericarditis does not respond to medical measures, that aspiration is worthless as a curative agent, that pyopericardium is not a lethal condition but the cure depends on pericardiotomy with provision for adequate drainage, that operative treatment should yield about 70 per cent of cures, and that postoperative adhesive pericarditis is not so common a complication as is generally supposed.

In a discussion on the subject of rickets, published in the Boston Medical and Surgical Journal, September 8, John Lovett Morse said: "There seems to be a general tendency among physicians to assume that, because ultraviolet radiation does good in rickets, it will also do good in all disturbances of nutrition or prevent their development. It does good in rickets because it activates cholesterol and, in this way, favors the deposition of calcium in the bones. It cures spasmophilia because it increases the calcium content of the blood. It helps certain cases of asthma and of nervous exhaustion, in which the calcium content of the blood is low, for the same reason. There is no reason to suppose that other disturbances of nutrition are due to a disturbance of the metabolism of calcium. There is no justification for thinking, therefore, that because ultraviolet irradiation is useful in conditions in which there is a disturbance of the metabolism of calcium, it will do good in those in which there is not."

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The Administration of Calcium Salts

The intravenous and subcutaneous administration of calcium are attended with dangers or discomfitures; therefore the possibilities of the oral route call for careful consideration. A survey of the literature on the absorption of calcium as it may be reflected in a change in the blood concentration of the element might leave one unconvinced of the efficacy of administering calcium compounds by mouth. Many clinicians have accordingly abandoned the practice. More recent studies give evidence, however, that with due attention to the conditions of administration it is possible to elevate the serum calcium concentration by the oral route of calcium supply. Experiments indicated that the optimal dose of calcium lactate is 5 gm. and that the drug must be given in aqueous solutions when the digestive tract is comparatively empty; that is, either before breakfast or several hours after food has been consumed. Larger doses prevent optimal absorption. (Jour. A. M. A., September 17, '27.)

Diversion

THE PRODIGAL

A little diversion now and then
Is tonic for the medical men.

The automobile heart is now appearing in the new nosology.

Paroptic vision is where the person can see to get about, even drive an auto on the streets safely, when blindfolded.

"Oocytin" is a newly discovered substance which starts the development of germ life already lying dormant in the egg. It has been experimented with by Drs. Guy W. Clark and Paul Sharp of the University of California. The hen beat them to it.

Two scientific doctors, with highly developed bumps of curiosity, have proven that a distended stomach causes drowsiness. Their experiment consisted of one of them swallowing a deflated toy balloon attached to a stomach tube and the other doctor inflated it and the subject became drowsy. A hog has known *that* ever since he was a pig, when filled up on corn or slop.

"Memoracoids" are tablets taken to strengthen memory. They have not been discovered yet. But it is on the principle figured out by the great astronomer in the arrangement of the heavenly bodies he located and named a star that had never been seen. It was necessary to complete the system and was later discovered. This new prospective memory tablet will be popular with the doctors and freely given—a stock prescription. It will also save time and hasten justice in our courts of law when fed to the amnesic witness.

Prof. Alexander Tchijevsky of the University of Moscow says when a judge in estimating the degree of guilt of a person convicted of crime, he should demand to know the meteorological and astronomical conditions obtaining at the time the crime was committed. He has discovered a decided relation between sunspot activity and human frailty. The nearer a crime is to the time when a sunspot activity reaches its maximum, the less is the responsibility of the guilty person for the crime committed. Sunspot, he says, produces an enormous amount of electrons, which on reaching the earth cause magnetic storms and other phenomena of nature. They also operate on the nervous system of man and bring marked change in his emotions and impulses.

This may all be true, and since so much has been learned of the vital effect of sunshine and the different rays of light upon vegetable and animal life, we will not question his pronouncement. But for the present a more practical result can be gotten, in this class of neurotics, by removing their gonads.

The Veronoff glandular treatment to renew youth in the aged and in the impotent, is headed for more financial trouble, and transplantation jobs in Hungary are at a discount. A Hungarian insurance company wrote to one of its aged policy holders to whom it had been paying an annuity as a result of a certain policy, as follows:

"We have learned that last fall you underwent an operation according to the method of Dr. Veronoff, and consequently it follows that you are younger today than you were when you signed the contract with us. In view of this fundamental change we find ourselves obliged to cancel the agreement with you."

Too bad that such a graft should be sapped of its vitality (finance) in its abnormal growth.

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Hormones

In the work of metabolism the hormones contributed by the various ductless glands—the endocrine chain—play the chief role. The hormone of the suprarenal gland is credited with two distinct functions; it stimulates the glycogenolytic function of the liver, and it either stimulates the sympathetic system of nerves or duplicates the effect of such stimulation on the body.

This hormone is known among physicians everywhere as Adrenalin. It is the first hormone ever isolated from any of the glands of internal secretion. Parke, Davis & Co., who discovered it on the advent of the twentieth century, gave it the name Adrenalin, signifying its derivation from the adrenal or suprarenal glands.

In order to make sure of obtaining the original product, physicians are advised to designate it by its original name—Adrenalin.

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Dr. Henry Tihen of Wichita, Kansas, recently visited the Bell Memorial Hospital. Dr. Tihen is on his way to Vienna, where he will take post graduate work..

SOCIETIES

SUMNER COUNTY SOCIETY

Resolutions

Whereas, our fellow physician, Dr. Thomas H. Jamieson has been called from his earthly labor; and

Whereas, since the organization of the Sumner County Medical Society, he has been an earnest worker for the Society in the advancement of the medical profession, ever striving for higher ideals, giving freely of his time and talent in the interest of public health, especially in his fight for the prevention of disease; and

Whereas, this organization will miss his council and guidance, yet well we revere his memory and endeavor to carry on the work he was compelled to relinquish.

Therefore, be it resolved, that we extend our deepset sympathy to the bereaved wife and other relatives; and

Be it further resolved, that a copy of this resolution be spread upon the minutes of the society, that a copy be sent to each of the local papers with request of publication, and a copy be given to Mrs. Thomas H. Jamieson.

Committee: DR. H. L. COBEAN
DR. R. W. VANDEVENTER
DR. W. H. NEIL

DECATUR-NORTON COUNTY SOCIETY

A meeting of the Decatur-Norton County Society was held at the Court House in Colby. October 7, Dr. C. H. Kinnaman, State Epidemiologist and Dr. S. S. Glasscock of the Tuberculosis Sanitorium were guests of honor. A public meeting was also held. There was also a meeting of the Ladies Auxiliary.

The following program was presented:

Paper: Dr. E. F. Leininger, Atwood, Kansas.

Paper: The Toxin-Antitoxin Prevention of Diphtheria—Dr. C. H. Kinnaman, Epidemiologist, State Board of Health, Topeka, Kansas.

Paper: The Care of the Border Line Mental Cases—Dr. S. S. Glasscock, State Sanatorium for Tuberculosis, Norton, Kansas.

Round Table: In charge of Dr. J. H. A. Peck, St. Francis, Kansas.

Business Meeting.

Dinner, 6:30 P. M. Odd Fellows Hall.

WYANDOTTE COUNTY SOCIETY

The Wyandotte County Society met at Bethany Hospital Tuesday evening, October 4. The following clinical program was presented:

Dr. Guy Smith, Intussusception.

Dr. L. B. Spake, Fractured Skull.

Dr. C. C. Nesselrode, Plastic Surgery, Planter Surface of Foot.

Dr. F. L. Helwig, Pathological Specimens.

Dr. J. A. Fulton, Pulmonary Tuberculosis.

Dr. H. W. King, Acute Appendicitis. Acromio-Clavicular Dislocation.

A plate lunch was served by the Hospital.

GOLDEN BELT SOCIETY

The Golden Belt Medical Society held its quarterly meeting at Salina, October 6, at the Salina Country Club.

The following is the program as it was arranged for this meeting:

2:30 P. M. Individual and group discussions, informal and enlightening—"Unusual Cases," "The World Series," "Whom do you think the Democrats will put up," "I am going to pay my dues at this meeting," "The weather," etc., etc.

3:00 P. M. Business Session.

3:30 P. M. "Pupillary Reactions in Systemic Disease"—Dr. R. E. Cheney, Salina, Kansas.

4:30 P. M. "Diagnosis and Treatment of Cancer of the Skin" (Lantern slides)—Dr. Richard Sutton, Kansas City, Mo.

5:30 P. M. "Appendicitis in Early Childhood"—Dr. Edwin Henry Schorer, Kansas City, Mo.

6:30 P. M. Dinner.

8:00 P. M. "Tigers"—(Lantern slide illustrations)—Dr. Richard L. Sutton, Kansas City, Mo.

HARVEY COUNTY SOCIETY

The regular monthly meeting of the Harvey County Medical Society was held at Newton on September 5, 1927.

The members had dinner together at the Hotel Ripley and then adjourned to the auditorium of the Axtell Christian Hospital where the program was held.

The minutes of the meeting of August 1, 1927, were read and approved. It was moved by Dr. Frank L. Abbey that flowers be sent to Dr. R. H. Hertzler, who is a patient in Bethel Hospital. Motion seconded by Dr. Schroeder. Motion carried. President directed secretary to see that this was attended to.

This meeting was supposed to have been

held in Whitewater, where the ladies had prepared a fine fried chicken dinner for us and a very hard rainstorm prevented our enjoying the dinner and we held a meeting in Newton instead. It was suggested by one of the members that the secretary take the matter up with the ladies in Whitewater and reimburse them for their efforts.

A paper on Cleft Palate was read by Dr. Alfred O'Donnell of Ellsworth, Kansas, and was freely discussed by the members present, Meeting adjourned.

H. M. GLOVER, Sec'y.

WILSON COUNTY SOCIETY

Dr. Frank M. Wiley has been practicing medicine in Fredonia fifty years! Quite a number of doctors have practiced medicine fifty years, but few, very few, have practiced in one location that long.

The Wilson County Medical Society, having profound love and admiration for the Doctor, arranged to fittingly celebrate the occasion and on Friday evening, June 17th, the doctors of the Society, their wives and a few guests met in the dining room of the Methodist Church here to do him honor. The guests, other than the members and wives, were Drs. L. D. Johnson and M. A. Duncan, Dr. J. N. Sherman and wife of Chanute, Dr. and Mrs. J. A. Butin; and the following relatives of Dr. Wiley: Mr. and Mrs. Paul Wiley of Neodesha, Mr. and Mrs. W. D. Christman and Mrs. Bertha Dennis, Mr. Solon Wiley, Mrs. Mark Wiley of Fredonia.

Dr. W. H. Addington acted as toastmaster, he being introduced by the President, Dr. W. H. Young. Doctor Wiley read a paper on "Then and Now," and it is so full of interest for us all that I am enclosing it for publication, hence comment on it is unnecessary.

Mrs. A. C. Flack gave the address of welcome; the toastmaster called on each member and guest for remarks—five minute limit—all responding. These short talks were the best possible evidence of the esteem in which the Doctor is held by those who know him best, and were worth fifty years of hard work, knowing them to be honest expressions.

Dr. Flack, on behalf of the Society, presented Dr. Wiley with a set of golf clubs, bag and golf balls.

E. C. DUNCAN, Sec'y.

STAFFORD COUNTY SOCIETY

The Society met in St. John at the residence of Dr. J. T. Scott, Wednesday evening September 14. This was another public meeting with an attendance of seventy-five. The visiting physicians were Dr. Embry, Great Bend; Drs. Jenkins and Cochran, Pratt, and the office force of the Pratt Clinic.

Of our membership there were present: Drs. F. W. Tretbar, J. J. Tretbar, T. W. Scott, Stafford; M. M. Hart, Macksville; L. E. Mock, R. E. Stivison, J. T. Scott, St. John.

The public was invited and sixty-five responded. As a program the Automatic Lantern Slide lecture on Nostrums, Quackery and Impure Foods was used. This lecture was obtainable throuh the A.M.A. and is a very interesting and instructive program. At the conclusion of the program light refreshments were served and a number of short talks made by doctors and laymen, all of whom commended highly such meetings and regarded them as the ideal method of reaching the public and enlightening it as to the wonderful accomplishments and progress of modern medicine.

As secretary of this society I have received letters from several secretaries of county societies inquiring as to our method of conducting public meetings. At the risk of making a lengthy report I am reproducing the reply to one letter of inquiry.

Dr. .....

My Dear Doctor:

Thanks for your letter of inquiry received this morning. The method we have adopted is very simple and is proving immensely satisfactory. Our regular September meeting was held last night with an attendance of seventy-five. Of that number ten were doctors and sixty-five laymen, both male and female. We had, at that time, an 80 per cent attendance of our local members. The remainder represented all business interests of our community as well as adjoining towns. We have been holding these public meetings regularly each month all summer and have never failed in having splendid attendance. I am thoroughly convinced that it is the method par excellence in disseminating medical propaganda. It does impose additional work, which falls mainly upon the secretary. The programs usually presented to the society answer for these meetings and can be varied as desired. Our meeting last night was "Stereopticon Slides Depicting Nostrums, Quackery and Impure Foods."

These slides can be rented from the A.M.A., and our crowd last night praised the program highly.

The Barton County Medical Society recently held one of these meetings with fine results and the Pratt County Society is now arranging to do likewise. Two Pratt physicians attended our last meeting.

This society seems to have been the originator of the plan and is anxious to have it tried out all over the state. I would certainly enjoy attending your first public meeting. The method I have used is to personally invite representative people of the community. This never fails to get a good attendance and you will be surprised at the interest manifested in papers and talks on technical medical subjects. After the lantern slides were shown last night an invitation was extended to those who cared to express themselves relative to the merits of public medical meetings. A dozen or more doctors and laymen replied. Their talks were all highly complimentary. I am sure it is the method of educating the public along medical lines and will be the means of eventually getting desired medical legislation. It is also the way to put irregulars and quacks out of business. I hope to hear from you after a trial is made and shall be glad to aid in any way and at any time.

Fraternally yours,
J. T. Scott, Sec'y.
Stafford County Med. Soc., St. John, Kan.

FRANKLIN COUNTY SOCIETY

PUBLIC MEETING

Strong interest in the fight on diphtheria was evidenced last night by the full house in the high school auditorium which attended the Franklin County Medical Society's open meeting. As a result of the meeting, it is believed great impetus was given to the campaign to start Saturday of this week to immunize school children not rendered immune last year.

Dr. Earle G. Brown, secretary of the state board of health, presented one reel of pictures to show the development of the treatment of diphtheria from Civil War days, and another was shown giving information regarding the manufacture of all serums and toxins. Supt. A. F. Senter lent his influence to the meeting, standing at the door to greet the visitors. Among those present were physicians from Douglas county, one from Miami and a good turnout of the members of the Franklin county society.

Dr. George W. Davis, president of the Franklin county organization announced that three Saturdays would be given over to free immunizations of all children between the ages of 6 and 10 from 9 a. m. until noon, Saturday, October 1, 8, and 15 at the following school houses: Field, Lincoln and Hawthorne in Ottawa, Lane, Rantoul, Richmond, Wellsville, Princeton, Williamsburg and Pomona. Immunization will be free to children between the ages of 6 and 10, and each must present a slip signed by parents. Free serum, furnished by the state, is here and the local physicians will administer it free. All children younger or older than the ages given will arrange for immunization with family physicians, if they desire. Last fall 1,085 children in Franklin county were rendered immune from diphtheria, and it is estimated by County Health Officer W. L. Jacobus that perhaps there are 3,000 others of the specified age who have not been immunized.—Ottawa Herald.

SEDGWICK COUNTY SOCIETY

The Sedgwick County Medical Society held its regular monthly clinic and business meeting on Tuesday, September 20th. The clinic was held all day at the Wichita Hospital with an unusually large attendance. The business meeting and program followed dinner at the Lassen Hotel in the evening. The clinics are proving very interesting and instructive and a larger number of doctors are attending, many bringing their own patients from the surrounding towns. The clinic program consisted of surgery in the morning and demonstration of x-ray and medical ward rounds in the afternoon. The next clinic will be held at St. Francis Hospital, November 15th.

The following papers were read and discussed at the evening meeting:

Analysis of a Thousand Cases Complaining of Gastric Symptoms—Dr. W. A. Phares.

Appendicitis in Children—Dr. D. W. Basham.

Infantile Diarrhea—Dr. Frank L. Abbey.

The society is working on plans and arrangements for the state meeting in May, 1928, and are looking forward to a large attendance.

W. J. Eilerts, Secy.

SHAWNEE COUNTY MEDICAL SOCIETY

The October meeting of the Shawnee County Medical Society was held Monday evening, October 3d, at Pelletier's Tea Room.

The program was as follows:

Sumner L. Koch, M. D., of Chicago—associate editor of Surgery, Gynecology and Obstetrics. Associate Professor of Surgery at Northwestern University Medical School.

5:30 P. M.—"The Treatment of Contractures with the Use of Free Grafts and Flaps." (Lantern slides.)

6:30 P. M.—Dinner.

7:30 P. M.—"The Diagnosis and After Treatment of Severe Infections of the Hand." (Lantern slides.)

EARLE G. BROWN, Secy.

Correspondence

Journal Kansas Medical Society
Topeka, Kansas.

Editor: There is a good deal of talk about the country practitioner and his lack of ability to properly diagnose and administer the proper remedy. I apprehend that in the cities there are numberless poor practitioners. I have had some experience lately that leads me to believe that there is also a want of knowledge among those we are taught to look up to as leaders and instructors in the profession.

Recently I bought a book on Ocular Therapeutics in which a certain drug was recommended. It was new to me and I wrote the author asking him about the article in question. He acknowledged to me in a personal letter that all he knew about the drug was derived from a translation by an European author; that he had never tried it, and didn't know even whether it could be procured.

Again, in "Principles of Therapeutics," written by a Yale University man, under the head of "Opium," in commenting on Heroin, he says: "This drug should be abolished." This may or may not be so. The next paragraph begins, "Another preparation formed artificially from morphine is Dionin ..... This drug also is not needed." I wonder how the oculists feel about such a statement when Dionin is such a useful drug and in constant use by them.

A number of years ago, when I was in general practice, I had a young lady come to me with an affection of the nails of the hands. I had little idea as to the trouble and without making a diagnosis, and without any intelligent idea of what ought to be prescribed, to gain time I gave her an antiseptic solution in which to dip her fingers. Then I wrote to one of the prominent skin men in one of our medical centers, describing as well as I could the affection and asked him for his advice.

In due time a reply came telling me that a certain drug would be found useful and, after a vain attempt to procure it through the local druggists and wholesale houses in Kansas City, I wrote the aforesaid prominent specialist only to find that he was as much at sea about the drug as I was and could not tell me where to procure it in his locality or who the manufacturer was.

It seems to me that we in the field, who pay money for the books that those men write, are entitled to real information; for one to condemn a drug, the merits of which he knows absolutely nothing about and another recommend a drug of which he is totally ignorant, makes us wonder if any statement the author makes has any value. So all we can get out of books of this character is confirmation of what our experience has already brought to us.

The ordinary doctor has to deal with real problems and not theoretic ones, and we would think no less of an author who would say he had no knowledge of a drug when that was a fact and then tell us what he did know or what he could vouch for on competent authority. Perhaps if only real information was handed out in the books published there would be fewer of them and those few smaller in size, but those of us away from the centers of learning would learn to rely on the author's statements.

Yours truly,
J. R. SCOTT.

Mr. Editor:

The Stafford County Medical Society, of which Dr. J. T. Scott is Secretary, has struck the keynote that tunes in harmoniously on the public ear. Inviting the public to attend the medical society meetings and having a mixed program—thus permitting and encouraging the laymen to attend and to take part in the proceedings of the society and to be entertainer as well as entertained, and at the same time to be a recipient of medical knowledge in hearing scientific subjects discussed—breaks the monotony of the purely medical proceedings.

Such a program, carried out, catches the public ear and educates the laity in the viewpoint of the medical profession, in the

relation each one sustains to the other one, and makes for good will, harmony and for the uplift of all concerned.

The leaders in the medical profession have been studying the question and suggesting ways and means to get in close touch with the people, that they may have a better understanding of the ethics of the profession. But the plans, methods and suggestions to accomplish the ends sought, to educate the populace to a proper understanding of the motive of the medical man has, as yet, had but little effect. This is shown by the defection caused by cult propaganda.

The simplicity of the Stafford County Medical Society's plan and its successful practical demonstration is the bow of promise.

The PRODIGAL

DEATHS

Warren M. Duffie, Burlingame, aged 67, died July 8 at Kansas City. He graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1906.

Arthur Wellington Clark, Lawrence, 67, died July 21 at the Lawrence Memorial Hospital, of cerebral hemorrhage. He graduated from the Harvard University Medical School, Boston, in 1884. He was formerly health officer of Lawrence and was a member of the Kansas Medical Society.

Fielding P. Stapleton, Lawrence, aged 59, died July 20 of carcinoma of the rectum. He graduated from the Marion-Sims College of Medicine, St. Louis, in 1892. He was a member of the Kansas Medical Society.

John H. Newman, Cherryvale, aged 88, died in July of senility. He graduated from the Eclectic Medical Institute, Cincinnati, in 1864.

Thomas Henry Jamieson, Wellington, aged 61, died August 21 of sarcoma of the spleen. He was graduated from Rush Medical College, Chicago, in 1891. He was a member of the Kansas Medical Society and had been Secretary of the Sumner County Society for 14 years. He was health officer for Sumner county for 14 years. He was also a director in the Kansas Tuberculosis Association.

Lewis J. Lyman, Manhattan, aged 89, died Sept. 30. He was graduated from Bellevue Hospital Medical College in 1862 and served for a time as contract surgeon in the Civil War. He located in Manhattan in 1865 and has lived there since that time.

Samuel Koser Shenck, Riley, aged 56, died June 18, at Plainville, of heart disease. He graduated from Rush Medical College in 1897.

J. A. Naylor, Clyde, aged 46, died during the latter part of September. He was graduated from the University Medical College, Kansas City, Missouri, in 1906. He was a member of the Kansas Medical Society.

John A. Fuller, Lane, aged 81, died October 2. He had practiced medicine in Lane for fifty years.

William G. Muir, Harper, aged 70, died October 4, of heart disease. He was graduated from the University of Michigan Medical School, Ann Arbor, in 1889.

Harriet A. Spaulding Clark, Arkansas City, aged 67, died August 13th. She graduated from the Kansas Medical College, Topeka, in 1897.

MEDICAL SCHOOL NOTES

Dr. H. R. Wahl, Dean of the Medical School, has returned from a motor trip through Yellowstone Park.

Dr. French, Dean of the University of North Dakota, visited the Bell Memorial Hospital September 6, 1927.

At the annual meeting of the Medical Society of the Missouri Valley papers were read by the following: Dr. Thomas G. Orr, "Salt in Medicine;" Dr. Nelse F. Ockerblad, "The Problem of Ureteral Obstruction;" Dr. Ralph H. Major, "Etiology and Mechanism and Treatment of Hypertension" and Dr. C. C. Nesselrode, "Perverted Physiology as a Factor in Diagnosis of Diseases of the Biliary Tract." Dr. Ralph H. Major was elected president-elect of this society.

The annual banquet of the K. U. Alumni Association will be held later in the year than as is the usual custom. Ruling by the Inter-State Post Graduate Medical Association forbidding banquets or any other meetings during the week of the Clinics denies us the privilege of holding the banquet at that time. An endeavor is being made to get a suitable crowd on Saturday

previous to the Clinic week. The Secretary of the society will advise the Alumni of the date and details of the banquet. Following the precedent set by the class of 1906 last year, the annual banquet this year will be in charge of the class of 1907.

Dr. Horace Boone '17, Lieutenant Commander of the U. S. Navy, was in Kansas City last month.

Doctors F. C. Helwig and E. H. Hashinger have returned from a trip to Cuba, Panama, and Honduras. While away they visted the Ancon Hospital in the Canal Zone.

Dr. Adolphe Boese '24, of Coffeyville, Kansas, recently visited the Bell Memorial Hospital.

Dr. Wm. Roach, '25, of Cincinnatti, Ohio, visited the Medical School this month.

Dr. John Winkler '25, visited the Medical School recently. Dr. Winkler is taking a residency and x-ray at the Massachusetts General Hospital.

Dr. James Scott '22, of Lebanon, Kansas, visited the Hospital this month.

The dispensary and colored hospital have been moved to a new site to make room for the construction of the Nurses' Home. The contract for the Nurses' Home and new ward unit has been let and building will start at once. ,

The post graduate group of the Northeast district met at the Bell Memorial Hospital Friday, September 23, 1927. The first lecture was on pediatrics by Dr. Wayne A. Rupe of St. Louis.

Medical Attention

The failure to provide adequate medical service to injured workmen reflects our inability to grasp the importance and social value of the speedy restoration of the earning capacity of injured workers. The payment of compensation and medical benefit is not in itself the end, but is simply a means of accomplishing the above result. Many employers and insurance carriers are furnishing additional medical services in order to restore the earning capacity of injured workmen and thereby reduce their compensation costs, and no one should quibble over the payment of a few dollars more than the maximum allowance.

Under the provisions of the old Kansas Workmen's Compensation Act the employer, on demand, was obliged to pay the medical and hospital charge in a sum not exceeding $150. While some physicians abused this fee by absorbing the entire amount in every case in which they were called, yet, on the whole, the physicians and surgeons of the state were unfairly treated. All other charges under this provision were paid first and the physician or surgeon received the balance and in many, many instances, was left with nothing for his services. This practice grew until in many localities it has become almost impossible to secure adequate medical attention in industrial accident cases.

The new Workmen's Compensation Act which became effective July 1, 1927, provides the employer shall furnish adequate medical and hospital services in a sum not to exceed $100, and that the Commission may allow an additional $100 in extreme cases. The act permits the employer to select the attending physician or surgeon, but we suggest that the employer name three or more reputable physicians, thus allowing the injured workman some choice. The law further provides on application by the injured workman the Commission may assign some other physician to the case.

In making settlements by agreement between the employer or insurance carrier and the injured workman, care should be taken to see that the charge for hospital and medical attention is paid. If there is any dispute as to the charge, the law provides such dispute shall be settled by the Commission.

Where settlements are not made by agreement and evidence is heard by the Commission, the fee for hospital and medical attention should be presented at the time of hearing. In making the award the Commission will direct the employer or insurance carrier to pay the fee approved, deducting the amount over the maximum allowance chargeable to the employer from the final payments of award made.

We have just compiled a fee schedule similar to the one approved by the Ohio Industrial Commission, and have submitted such schedule to a committee appointed by the President of the Kansas State Medical Society. The schedule has been approved by this committee, adopted by the Public Service Commission and will soon be ready for distribution. All controversies regarding fees will be settled by this schedule.

JOHN H. CRAWFORD,
Commissioner of Workmens' Compensation.

FEE SCHEDULE

Adopted by the Public Service Commission of the state of Kansas and effective July 1, 1927.

Miscellaneous

Minor injuries (first dressing) day at office,	$2.00 to	$3.00
Minor injuries (first dressing) home or hospital	4.00 to	5.00
Minor injuries (first dressing) night (9 p m to 6:30 a m)	6.00 to	7.00
Subsequent treatment at office	1.50 to	2.00
Hospital visit		2.00
House call		3.00
Administration of anaestehtic by physician (minor operation)		5.00
Administration of anaestehtic by physician (major operation)		10.00
Assistant to surgeon (physician) major operation		10.00
Removal foreign body eye (ordinary)	2.00 to	3.00
Suturing small cuts or lacerations at office		5.00
Injection antitetanic serum (including cost of serum)		5.00
Plaster casts (including material and depending on location)	5.00 to	50.00
Wassermann examination		5.00
Blood examination		5.00
Urinalysis (chemical)		2.00
Urinalysis (microscopical and chemical)		5.00

Special Operations

Laparotomy—Minimum fee with after care	$100.00
Note.—On account of the vast difference in such cases, claim for services rendered should be based on special correspondence.	
Herniotomy—single (including after care)	75.00
Herniotomy—double (including after care)	100.00
Tendon suture	25.00
Reducing hernias by taxis and after care	5.00

Dislocations

Flat rate, including reduction and subsequent treatment.

In case of more than one dislocation, the fee shall be the major one plus an additional fifty per cent of the fee prescribed for each of the others herein classified.

Shoulder		$35.00
Clavicle	$35.00 to	50.00
Elbow	35.00 to	50.00
Hip		50.00
Knee		50.00
Patella		5.00
Ankle		25.00
Finger		10.00
(With 50 per cent additional for more than one.)		
Toe		5.00
(With 50 per cent additional for more than one.)		
Lower jaw		10.00

Fractures

Flat fee, including reduction and subsequent treatment.

In a case where multiple fractures occur the fee shall be the major plus an additional fifty per cent of the fee prescribed for each of the others as herein classified.

Humerus		$75.00
One bone of the forearm	$35 to	50.00
Both bones of the forearm	50.00 to	75.00
Carpal bones, one or more		15.00
Femur		100.00
Tibia		50.00
Fibula		25.00
Tibia and fibula		75.00
Patella, with operation		100.00
Patella, without operation		50.00
Phalanx, metatarsal or metacarpal		15.00
Os calcis		30.00
Astragalus		30.00
Tarsal other than os calcis or astragalus		15.00
Rib—single or multiple		10.00
Nasal bones		10.00
(With 50 per cent additional for additional fractures.)		
Pelvis—a proportionate fee on the above basis will be determined according to conditions present.		
Coccyx, without operation		10.00
Coccyx, with operation		50.00
Lower jaw (not including dental work)		40.00
Upper jaw—nonoperative		15.00
Upper jaw—operative fee determined according to conditions.		
Clavicle		50.00
Scapula	$20.00 to	40.00
Skull, operative		100.00
Skull, non operative		25.00
Vertebrae—minimum		50.00
Note.—On account of vast differences in such cases, claims for additional services should be based on special correspondence.		
Compound fracture—and additional charge of 50% may be added in infected compound fractures.		
Wiring or plating—an additional charge of 50% may be added when it is necesary to perform open operation. This is not in addition to amount allowed for compound fractures.		

In unoperated complicated fractures in which union is not taking place within niety days, an additioal charge may be allowed at the discretion of the Public Service Commission.

Amputations

Flat rate including amputation and subsequent treatments.

Note.—The minimum fee in the items under this section are intended to be applied in those cases where the injuries were so serious that death reulted within one week following the operation. The maximum and intermediate fees are inteneded to cover more extended subsequent attention.

In case of more than one amputation, the fee shall be the major plus 50 per cent of each of the others herein classified.

Hip	$100.00 to	$150.00
Leg, at knee or above	75.00 to	125.00
Foot, ankle or below knee	50.00 to	75.00
Arm, at shoulder joint	75.00 to	100.00
Hand, wrist, forearm or arm	50.00 to	75.00
One toe or finger		25.00
(With 50% additional fee for more than one.)		

Fee Schedule of Physicians Specializing in Diseases of the Eye

Note.—These fees will be approved only to physicians of recognized standing whose practice is strictly limited to eye, ear, nose and throat work.

Foreign body of cornea and sclera:	
(a) Attached to cornea or sclera but not imbedded	$3.00
(b) Simple imbedded	3.00

(c) Difficult or complicated—including cases requiring use of magnet .$5.00 to	15.00
Cauterization of corneal ulcer (chemical) ..	5.00
Cauterization of corneal ulcer (thermal) ..	10.00
Laceration of lids or conjunctiva requiring suturing	10.00
Extraction of foreign body from inside the eyeball with or without magnet 50.00 to	75.00
Treatment extensive burn of the cornea (initial treatment) ..... 5.00 to	10.00
Penetrating wounds:	
(a) Not requiring surgical interference .	10.00
(b) Requiring surgical interference (e.g., lacerated cornea with prolapsed iris requiring irridectomy)	50.00
Enucleation of eyeball (flat rate including after care):	
(a) Simple enucleation	50.00
(b) Implantation operation	75.00
Plastic operation on lids ..... 50.00 to	100.00
Extraction of traumatic cataract (flat rate including after care)	100.00
Discission of capsule (flat rate including after care)	50.00
Operation on pterygium (flat rate including after care)	25.00
Consultation	10.00
Complete opthalmological examination and report	10.00
Complete ophthalmological examination and report for court purposes and only upon order of the Commission	25.00
Refraction, when authorized by the Commission ..... 5.00 to	10.00
Office calls	2.00
Home calls	3.00
Hospital calls	2.00

Rules on X-Ray

X-Ray examination may be made upon request of the attending physician in any case where it can be clearly shown that such an examination is essential in the diagnosis or treatment of an industrial case.

A fee of from $5 to $20 will be allowed for X-Ray examination and a fee of $5 for subsequent examinations if such are necessary.

Dental Surgeon's Fee Schedule

Simple extraction, $2, and $1 for each additional tooth up to $10 will be allowed.

Impacted teeth	$5.00
The above fees include the administering of the anaesthetic.	
Vulcanite plates, either upper or lower	25.00
Partial vulcanite plates, upper with gold clasps	25.00
Partial vulcanite plates, lower with gold lingual bar and gold clasps	35.00
Porcelain crowns with gold base (cast or swaged and soldered)	15.00
Porcelain crowns with cast alloy base	12.00
Porcelain crowns without metal base	8.00
Gold shell crowns, all cusps to be reproduced and reinforced, if swaged, or carved and cast.	
Bicuspids	10.00
Molars	15.00
Dummies in bridgework	7.50
Alloy fillings: All alloy fillings shall be polished and have a perfect contact and occlusion, and shall be carved to the original contour of the tooth.	
Pit cavities	1.00
Cavities involving two surfaces	3.00
Cavities involving three surfaces	4.00
Extensive alloy restoration	5.00
Gold fillings, cast or malleted. No gold fillings shall be placed in other than the 12 anterior teeth, and then only when the cavity extends to the incisal edge.	
Mesio-incisal and disto-incisal cavities	6.00
Mesio-incisal-distal cavities	10.00
Synthetic porcelain fillings	6.00
All cavities shall be lined with Caulk's cavity lining before placing synthetic porcelain filling.	
Removal of pulp and filling canals: No teeth shall be devitalized for the purpose of placing crowns, bridgework or attachments for removable work.	
Anterior teeth	3.00
Posterior teeth	5.00

In fracture of bones involving the teeth the fee will be determined according to conditions present and treatment rendered.

General anaesthetic for other than the removal of the teeth, fee same as in general fee schedule.

No gold shall be used for inlays under 22 K. No gold shall be used for crowns under 22 K, 30 guage. No solder shall be used under 18 K. All cast clasps shall be of Ney Oro-E cast clasp metal or equal. The teeth to be used on all vulcanite dentures shall be of an "A" grade of porcelain and alloy pins.

All alloy for fillings shall be of a recognized high grade.

General Information

In plastic operations and all other surgical procedures not included in this schedule, fees will be paid in keeping with other fees outlined.

Itemized statements shall be furnished upon request to the Commission.

Fees shall not be approved for the services of more than one attending surgeon over the same period of time. This does not apply to consultant, anaesthetists, assistants or cases where the need of an ophthalmologist is clearly shown.

Extra fees for dressing material and drugs will not be approved except in unusual cases wherein an extraordinary amount of such material or drugs is used. In such cases, the material or drugs used will be paid for at cost.

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When women continue to have fever and repeated negativge blood cultures after delivery, acute miliary tuberculosis should be considered. This is the conclusion drawn by Wiseman and Retan in a report published in the July number of the Archives of Internal Medicine. They believe this condition is of more frequent occurrence than the number of cases reported would indicate. The diagnosis is seldom made during life and most of the cases are classed as puerperal sepsis. The infection may come from without through the vagina or may be secondary to a focus elsewhere in the body and the strain incident to pregnancy or delivery may cause increased activity and general dissemination of the disease.

Draft of Proposed Basic Science Act

An Act to establish a state board of examiners in the basic sciences underlying the practice of the healing art, to provide for its organization and powers, to provide that certification by such board be a prerequisite to eligibility for examination for license to practice the healing art and to define healing art.

Be It Enacted by the Legislature of the State of Kansas:

SECTION 1. **Basic Science Certificate Required.**—No person shall be eligible for examination or permitted to take an examination for a license to practice the healing art or any branch thereof, or granted any such license, unless he has presented to the licensing board or officer empowered to issue such a license, a certificate of ability in anatomy, physiology, chemistry, bacteriology, pathology, diagnosis and hygiene (hereinafter referred to as the basic sciences), issued by the state board of examiners in the basic sciences.

SECTION 2. **The Healing Art Defined**—For the purposes of this Act, any license authorizing the licentiate to offer or undertake to diagnose, treat, operate on or prescribe for any human pain, injury, disease, deformity or physical or mental condition is a license to practice the healing art.

SECTION 3. **Board of Examiners in the Basic Sciences:-Composition**—The State Board of Examiners in the Basic Sciences shall be composed of the Chancellor of the University of Kansas, the President of the Kansas State Agricultural College, the President of the Kansas State Teacher's College at Emporia, the President of the Kansas State Teachers' College at Hays, and the President of the Kansas State Teachers' College at Pittsburg.

SECTION 4. **Organization of Board: Election of Officers, Seal, Rules, Compensation**—The Board shall meet and organize as soon as practicable after the passage of this act. It shall have power to elect officers, to adopt a seal, and to make such rules as it deems expedient to carry this Act into effect. The board shall keep a record of its proceedings, which shall be prima facie evidence of all matters contained therein. Each member of the board shall receive Ten Dollars per diem and actual expenses, when actively engaged in the discharge of his duties. The compensation of the members and other expenses of the board shall be paid out of the fees received from applicants, but this is not to be construed as preventing appropriations to cover deficits. The treasurer of the board shall give such bond, running in favor of the state, as the state treasurer shall determine. The office of the board shall be in the state capital, and quarters for such office shall be assigned in the capital buiding or any other building occupied by the state government.

SECTION 5. **Fees Payable by Applicants**—The fee for examination by the board shall be Fifteen Dollars. The fee for re-examination within any twelve month period as hereinafter provided shall be Five Dollars, but the fee for re-examination after the expiration of twelve months shall be the same as the original fee. The fee for the issue of a certificate by authority of reciprocity on the basis of qualifications as determined by the proper agency of some other state, shall be Five Dollars. All fees shall be paid to the board by the applicant at the time of filing application. The board shall pay all money received as fees into the state treasury, to be placed in a special fund to the credit of the board. The auditor of state is hereby authorized to draw his warrant upon the treasurer who shall pay out of such fund all expenses incurred by the board, on vouchers signed by the president and the secretary of the board.

SECTION 6. **Examinations.**—The board shall conduct examinations at such times and places as it deems best. Every applicant, except as hereinafter provided, shall be examined to determine his knowledge, ability and skill in the basic sciences. The examination shall be conducted in writing, but may be supplemented by an oral examination, and if practicable, shall be supplemented by an examination in the laboratory dissecting room and dispensary, and at the bedside. If the applicant receives a credit of 75 per cent or more in each of the basic sciences, he shall be considered as having passed the examination. If the applicant receives less than 75 per cent in one subject, and receives 75 per cent or more in each of the remaining subjects, he shall be allowed a re-examination at the examination next ensuing, on application and the payment of the prescribed fee; but he shall be required to be re-examined in all branches. If the applicant shall receive less than 75 per cent in more than one subject, he shall not be re-examined within the period of one year next following his original examination, nor unless he presents proof satisfactory to the board of additional study in the basic sciences sufficient to justify re-examination.

SECTION 7. **Requirements for Certificate**—No certificate shall be issued by the state board of examiners in the basic sciences unless the person applying for a cerrtificate submits evidence satisfactory to the board: (1) that he is not less than twenty-one years of age; (2) that he is a person of good moral character; (3) that he was graduted by an accredited high school or school of similar grade, or possessed educational qualifications equivalent to those required for graduation by such an accredited high school, before he began the study of the healling arts, and (4) that he has a comprehensive knowledge of the basic sciences as shown by passing the examination given by the board, as by this Act required.

SECTION 8. **Reciprocity**—The state board of examiners in the basic sciences may in its discretion waive the examination required by section 7, when proof satisfactory to the board is submitted, showing that the applicant has passed the examination in the basic sciences before a board of examiners in the basic sciences or a board authorized to issue licenses to practice the healing art, in another state, when the requirements of that state are, in the opinion of the board, not less than those providedd by this Act. The provisions of this section shall apply only to examinations conducted by the boards or officers of state that grant like exemptions from examinations in the basic sciences to persons granted certificates by the board of this state.

SECTION 9. **Appeal from Board's Decision.**—Any applicant who has been denied examination by the board may within thirty days after such denial appeal to the district court for the county in which the board has its office; and such court shall on such appeal inquire into the cause of such denial. If in the opinion of the court admission to examination was refusedd without just cause, the court may order the board to examine the applicant. Notice of an appeal from the denial of the board of the right to examination may be served on any member of the board by leaving with him any adult member of his staff or household, at his usual place of business or abode, an attested copy thereof within thirty days after said board has notified the applicant of its refusal to examine him.

Hearings of such appeals shall proceed in accordance with such rules as the district court may determine.

SECTION 10. **Certificates and Licenses Void.**—Any basic sciences certificate and any license to practice the healing art or any branch thereof which is issued contrary to this act shall be void. A board which has issued a license by virtue of a void basic science certificate shall revoke or cancel such license. The procedure in such revocation or cancellation shall be in accordance with the provisions of the act under which such license was issued, for the cancellation or revocation of licenses generally. The certificate issued to any person by the state board of examiners in the basic sciences shall be automatically revoked by the revocation of any license issued to such person to practice the healing art or any branch thereof.

SECTION 11. **Practice Without Basic Science Certificate Forbidden.**—Any person who shall practice the healing art or any branch thereof without having obtained a valid certificate from the state board of examiners in the basic sciences, except as otherwise authorized by this act, shall be fined not more than One Hundred Dollars or imprisoned for not more than 30 days, or both, in the discretion of the judge.

SECTION 12. **Fraudulent Certificates Forbidden.**—Any person who shall obtain or attempt to obtain a basic science certificate by any dishonest or fraudulent means, or who shall forge, counterfeit or fraudulently alter any such certificate, shall be fined not more than Five Hundred Dollars, or imprisoned not more than 12 months or both, in the discretion of the judge.

SECTION 13. **Fraudulent Licenses Forbidden.**—Any person who shall obtain or attempt to obtain a license to practice the healing art or any branch thereof from any board authorized to issue any such license, without presenting to said licensing board a valid certificate issued by the state board of examiners in the basic sciences, as in this act required, shall be fined not more than Five Hundred Dollars or imprisoned not more than 12 months, or both, in the discretion of the judge.

SECTION 14. **Issue of Fraudulent Licenses Forbidden.**—Any person who knowingly issues or participates in the issue of a license to practice the healing art or any branch thereof to any person who has not presented to the licensing board a valid certificate from the state board of examiners in the basic sciences, or any person who has presented to such licensing board any such certificate obtained by dishonesty or fraud, or any forged counterfeit certificate, shall be fined not more than Five Hundred Dollars, or imprisoned not more than 12 months, or both, in the discretion of the judge.

SECTION 15. **Fees Paid Unauthorized Practitioners Recoverable.**—Any money paid out by any person as compensation for services rendered in the practice of the healing art or any branch thereof to any person not validly licensed to practice such healing art or branch, when the payor did not know that such person was not validly licensed so to practice, may be recovered by the person who has paid such money by a suit instituted within two years from the date when such fee or compensation was paid.

SECTION 16. **Enforcement.**—The state board of examiners in the basic sciences and the various boards authorized to issue licenses to practcice the healing art or any branch thereof shall investigate any supposed violation of this act and report to the proper county attorney all the causes that in the judgment of such board warrants prosecution. Every police officer, sheriff and peace officer shall investigate all supposed violations of this act and apprehend and arrest all violators thereof. It shall be the duty of the attorney-general and of the several county attorneys to prosecute violations of this act.

SECTION 17. **Exceptions.**—This Act shall not be construed as applying to dentists nurses or optometrists, practicing within the limits of their respective callings; nor to other persons licensed to practice the healing art or any branch thereof in this state when this Act takes effect; nor to persons specifically permitted by law to practice without licenses practicing within the limits of the privileges thus granted them.

SECTION 18. **Saving Clause.**—No provision of this Act shall be construed as repealing any statutory provision now in force at the time of its passage with reference to the requirements governing the issuing of licenses to practice the healing art or any branch thereof; but any board authorized to issue licenses to practice the healing art or any branch thereof may in its discretion accept certificates issued by the board of examiners in the basic sciences in lieu of examining applicants in such sciences or may continue to examine applicants in such sciences as heretofore. The unconstitutionality of any part of this Act shall not be construed as invalidating any other part thereof.

SECTION 19. **Short Title.**—This Act may be cited as "Basic Science Act, 1927."

SECTION 20. **Date of Taking Effect.**—This Act shall take effect and be in force from and after its publication in the Statute Book.

Two Psychiatric Fellowships Open

The National Committee for Mental Hygiene announces that two fellowships for training in extramural psychiatry at the Institute for Child Guidance in New York City are available for properly qualified candidates.

These fellowships have been created by the Commonwealth Fund to provide special training for physicians who have had hospital experience in psychiatry, but who wish to prepare themselves for community work in the fields of child guidance, delinquency, education and dependency.

The fellowships are open to physicians who are (1) under 35 years of age, (2) graduates of class "A" medical schools, and (3) who have had at least one year of training in a hospital for mental diseases maintaining satisfactory standards of clinical work and instruction.

Inquiries and applications should be addressed to Dr. Frankwood E. Williams, Medical Director, the National Committee for Mental Hygiene, Inc., 370 Seventh Avenue, New York City.

Yeast

Yeast is rich in vitamin B. This is the only vitamine which it contains in important quantity as far as is known at present. According to New and Nonofficial Remedies, 1927, yeast has been used (a) in the

ter, Minn (Journal A. M. A., Oct. 8, 1927), point out that at the present time a number of new clinical and laboratory criteria for the study of hepatic disase are available; these additions to our armamentarium should be of assistance in the management of diseases of the liver. While there have not been any noteworthy advances in the cure of hepatic disease, a number of symptomatic remedies hav been introduced which seem to be of definite value. The preoperative preparation and postoperative management of jaundiced patients has been improved, and various measures have been successfully employed for the treatment of various types of postoperative toxemia in this group. While much of the treatment mentioned is empiric, clinical and experimental evidence seems to justify its use. The small successs thus far attained should encourage further studies in the treatment of hepatic disorders.

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Active Immunization in Scarlet Fever

It appears to R. G. Perkins, Cleveland (Journal A. M. A., Oct. 8, 1927), that the procedure of active immunization justifies itself in its records, and that further careful reports dealing with standardization of the test itself will do much to blow away some of the unnecessary clouds which prevent a clear view of the subject. In a series of school children totaling nearly 29,000 about 8,000 received one or two doses of sodium ricinoleate vaccine, while 21,000 did not. The work was begun during the rise of the seasonal curve, and in a rather susceptible group. When only one dose had been given, the incidence per thousand was two and one-half times greater in the untreated, and when two doses had been given it was more than six and a half times.

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Epidemiology of Rural Typhoid

D. G. Gill, Montgomery, Ala. (Journal A. M. A., Oct. 8, 1927), reviews the typhoid situation in Alabama, especially in small towns. He says that it is the small town and strictly rural districts that supply most of the cases. The highest rates occur in the towns with populations under 1,000, while 80 per cent of the typhoid occurs in rural areas and towns with populations up to 5,000. Sanitation and water supplies are defective in this group. Typhoid carriers are common. Approximately 10 per cent of those who have had typhoid become permanent carriers, and are probably the source of most rural typhoid.

past as a bactericide in the treatment of superficial infections but this use of yeast has been practically abandoned; (b) as a source of vitamin B, for which yeast has been widely extolled; but, under usual conditions, the vitamin B requirement can be met by customary foods; (c) as a laxative, but only in case it does not cause intestinal distention; (d) in the past, as an internal remedy for furuncles and acne, but it is doubtful whether the benefit is in excess of the laxative effect; (e) as a stimulator of leukocytosis, but its efficacy in this respect is doubtful. The yeast obtained in grocery stores is essentially "brewer's yeast." It may be obtained either in semi-solid form or in the form rendered solid by the addition of absorbent material. (Jr. A. M. A., September 27, '27.)

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Digitalization

The term "digitalization" was coined to signify the full pharmacologic action of the drug to the limit of safety. Laboratorial and clinical investigations have developed the digitilization amount of digitalis to be, for a 150 pound (68 kg.) adult weight, a minimum of 22½ grains (1.45 gm.) and a maximum of 33 grains (2.2 gm.). Half the minimum dose may be given at once and then 2 or 3 grains (0.13 to 0.2 gm.) every six hours, or the other half of the minimum dose may be given on the second day. If the patient needs more digitalis for digitalization, the amount is gradually increased by 2 or 3 grains, perhaps every six hours, until symptoms of digitalization appear. Digitalization should not be attempted if the patient has previously been taking digitalis. The dosage advised, must of course, be greatly modified with frail, underweight persons. An overweight person, when that weight is largely due to fat, must not be given doses according to his weight. The condition of the patient must also be taken into account. Digitalization means digitalis poisoning. Such poisoning should not be inaugurated except by a careful determination of the exact condition of a patient to be treated. The general practitioner should not thoughtlessly digitalize his patient unless he has hospital or other facilities for determining the exact condition of his heart and his excretory ability. (Jour. A. M. A., September 10, '27.)

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Medical Treatment in Diseases of Liver and Bile Passages

Albert M. Snell and J. F. Weir, Roches-

O-Iodoxybenzoic Acid in Treatment of Chronic Arthritis

Of thirty-one cases of chronic arthritis treated by orbert C. Trauba, Boise, Idaho, and others (Journal A. M. A., Oct. 1, 1927) with intravenous oral or rectal administration of o-iodoxybenzoic acid, 16 per cent were markedly improved, 16 per cent moderproved, 29 per cent unimproved, and two proved, 29 per cnt unimproved, and two cases improved (7 per cent) as a result of other therapeutic measures. These cases listed as "slightly improved" showed so little improvement in general that little crdit can be given to the drug. The first form in which the drug was used was a 1 per cent solution prepared by neutralizing 1 Gm. of *o*-iodoxybenzoic acid with 3.57 Gm. of barium-free normal sodium hydroxide, according to the method outlined by Loeven hart. Sterilization was assured by heating this solution in a water bath at 97 C. for ten minutes. Injection was made intravenously by the gravity method, and from ten to fifteen minutes was allowed for the injection of 100 cc. of the solution. A course of treatment consisted of eight injections givn biweekly. The initial dose consisted usually of from 50 to 75 cc. of the solution, and the remaining doses consisted of 100 cc. each. Next the ammonium salt of *o*-iodoxybenzoic acid was used. A 1 per cent solution of this salt was prepared by dissolving 1 Gm. of the salt in 100 cc. of boiling distilled water and filtering through filter paper. This solution constituted one intravenous does, which was given under sterile precautions within one hour after preparation. A course of treatment consisted of the size and frequency of dosage used with the sodium salt. Because of the marked discomfort produced by the intravenous administration of the drug, oral administration was tried. The drug was put up in 0.5 Gm. capsules coated with phenyl salicylate; one such capsule was given the first day and two such capsules daily for the succeeding thirteen days. A rest of two weeks was then given, and the course repeated in four cases. The intravenous administration of the drug gave marked discomfort in every case. The following symptoms, in the order noted, were observed when the sodium or ammonium salt was used: Smarting of the tongue, of the nasal mucous membrane, of the conjunctivae and of the forehead; then generalized tingling of the skin followed by a burning sensation in the epigastrium. Nausea occurred frequently and three of the patients had a tendency to vomit after every injection. There was market epiphora, flushing of the skin and perspiration. There were no untoward effects. Local extravasation of the solution produced only smarting at the site of injection. Observasion of the solution produced only transient tions on blood pressures were made in the first eight cases and showed, uniformly, a sharp rise of from 8 to 30 mm. of mercury in systolic and diastolic pressures occurring within a few minutes after injection was begun and in spite of the usual decrease in pulse rate of from 2 to 14 beats a minute. This was followed almost immediately by a sharp decline in blood pressure to from 10 to 15 mm. below preinjection pressure. This was followed by a gradual rise to normal, requiring from one to five hours. The respiratory rate usually decreased from 3 to 6 a minute, but at no time did apnea result. A rise in temperature of from 0.5 to 1 degree F. was noted in several instances. The blood picture was apparently unaffected by the drug. Oral administration produced the following symptoms in the order named: Nausea of varying degree and duration and a burning sensation in the epigastrium. This was followed somewhat later by tingling of the skin and a feeling of warmth in the affected joints. All symptoms were mild and bearable. Patients who had received both the intravnous and oral administratieons readily preferred the latter. Rectal administration proved as bearable as the oral method. In cases in which the intravenous method cannot be used, the rectal appears to be the method of choice.

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Effects of Combined Radiation and Lead Therapy

Francis Carter Wood, New York (Journal A. M. A., Oct. 8, 1927), has found the combination of lead and the roentgen ray more effective than either alone on a rat carcinoma of high virulence. On a rat sarcoma of still greater growth capacity, no such increase in the effectivenss of the roentgen ray can be observed. A preliminary study of the effects of the addition of dextrose to the lead mixtures, or of preliminary injections of dextrose followed by lead, has shown that the dextrose does not seem to increase the efficacy of the lead in its action on tumors, nor does it apparently increase the efficiency of the roentgen ray.

Specificity of Minot-Murphy Diet in Pernicious Anemia

I. C. Brill, Portland, Ore. (Journal A. M. A., Oct. 8, 1927), has treated by the Minot-Murphy method ten cases of pernicious anemia and four cases of severe secondary anemia. In the latter series were included two cases in which anemia was the result of more or less continuous bleeding, over a long period of time, from the uterus and the rectum, respectively. In both instances the lesions were benign and were removed by operation before the special diet was commenced. The third case was one in which the anemia was apparently due to syphilis, and treatment for the latter was carried out, together with the application of the dietary measures. In the fourth case the anemia resulted from a gastric carcinoma. The growth was confined to the greater curvature of the stomach, about two-thirds up on the cardiac end. The results obtained from treatment in these cases are suggestive. The uniformity with which the pernicious anemia series responded to the diet, while four consecutive cases of secondary anemia treated under exactly the same condition failed to show a similar response, is highly suggestive that the diet used furnishes a therapeutic principle specific for pernicious anemia. Brill feels that these results would appear to justify a theory that pernicious anemia is due to a lack in the body of a necessary metabolic substance bearing a relation to this disease not unlike the relation which insulin bears to diabetes, and that this substance is partially supplied by the Minot-Murphy diet.

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Antirachitic Activity of Monochromatic and Regional Ultraviolet Radiations

Alfred F. Hess and William T. Anderson, Jr., New York (Journal A. M. A., Oct. 8, 1927), assert that ultraviolet radiations shorter than those of sunlight are more potent in healing rickets than the effective area of solar rays—the band comprising waves from 290 to 313 millimicrons. A study of monochromatic light demonstrated the marked potency of the wave lengths 280 millimicrons (2,800 angstrom units) and 302 millimicrons (3,025 angstrom units). It showd that activity at 313 millimicrons (3,130 angstrom units) is very feeble and that this point must be regarded as the upper limit of the antirachitic field. The area of specific solar radiations is markedly circumscribed; a difference of a few millimicrons or millionths of a millimeter determines whether or not waves are effective. During the winter months when the shorter ultraviolet rays do not reach the earth and the longer ones are less intense, the width of the antirachitic zone of sunlight is about 5 millimicrons. These observations emphasize the danger of the small band of specific radiations being filtered from the atmosphere by moisture, dust, smoke and other foreign substances.

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Influence and Therapeutic Use of External Heat

The subjects discussed by Ralph Pemberton, Theodore H. Weisenburg, A. Bruce Gill and Jay F. Schamberg, of Philadelphia (Journal A. M. A., Oct. 8, 1927), are: Physiology and use of heat in internal medicine; forms of application; therapeutic indications and practice; nephritis, arthritis and rheumatoid conditions; local application of heat in arthritis. The use of heat in diseases of the nervous system; heat in the psychoses and psychoneuroses; organic nervous diseases. Heat in the surgical and orthopedic conditions; traumatic conditions; inflammatory conditions; chronic backache. Heat in dermatology; electrodesiccation; electrocoagulation; treatment by refrigeration.

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Combination of Colloidal Lead and Irradiation in Cancer Therapy

H. J. Ullmann, Santa Barbara, Calif., (Journal A. M. A., Oct. 8, 1927), believes that one problem which must be worked out is that of determining the minimum amount of lead necessary to produce regression when combined with the roentgen ray, so that lead intoxication may be reduced to the minimum. Further, from the results of his investigations, he considers it possible to mobilize the lead stored in the bones after the first course of treatment, so that the patient's tumors may be releaded without injecting more of the metal.

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There are now and always have been a good many children that should have training, nervous and backward children particularly, and physicians are frequently asked to recommend some school devoted especially to this kind of work. In our advertising pages will be found an announcement of the Trowbridge Training School, Kansas City, Missouri, which should meet all such requirements.

Undiagnosed Cough

William C. Voorsanger and Fred Firestone, San Francisco (Journal A. M. A., Oct. 1, 1927), review 200 cases of cough not due to active tuberculosis. Tuberculosis lesions have not been demonstrated in guinea-pigs from inoculations of sputum free from tubercle bacilli as determined by the smear method. Infectious bronchitis and asthma must be recognized as a disease. It was present in 37 per cent of the cases. Its main etiologic factor is influenza. The prevailing organisms found in the infectious group are *Micrococcus catarrhalis, Streptococcus nonhemolyticus, Streptococcus hemolyticus* alpha and beta, *Streptococcus viridans* and secondary invaders, such as gram-positive diplococci and staphylococci. The infectious group is amendable to treatment with an autogenous vaccine, approximately 10 per cent of patients immunized have remained entirely free of symptoms after two years. Thirty-eight per cent of the series with peribronchial and hilum thickening, enlarged bronchial root glands or even fibrotic infiltrations in the lungs, particularly if basal, are in an undiagnosed group and must be given further study. Patients in this group must be considered as future subjects for either tuberculosis or bronchiectasis. Careful physical and roentgen-ray examination and sputum culture is recommended for all patients with cough persisting more than six weeks. Beginning bronchitides should be studied as carefully as beginning tuberculosis. Such measures as injection of iodized oil and diagnostic pneumothorax followed by roentgenograms are of inestimable value in differentiating various pulmonary nontuberculous conditions.

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Primary Carcinoma of Bronchi

Thomas McCrae, Elmer H. Funk and Chevalier Jackson, Philadelphia (Journal A. M. A., Oct. 1, 1927), analyze 187 collected cases, including their own. The evidence obtained suggests that carcinoma of the lung, which in the great majority of cases originates in a bronchus, is increasing in frequency. These bronchial tumors appear to have a relatively low malignancy, and hence the hope that early diagnosis and intensive roentgen-ray therapy may be effectual in at least prolonging life. Early diagnosis should be made if the possibility of bronchial neoplasm is considered and careful studies are made. The early symptoms are usually those of bronchial irritation and the early signs of bronchial obstruction. By bronchoscopy a positive diagnosis can almost always be made promptly and proper treatment instituted. Patients with obscure pulmonary and bronchial symptoms have a right to the benefit of bronchoscopy. Only in very a rare case is removal possible by the bronchoscope. Dependence must be on intensive roentgen-ray therapy, the details of the administration of this depending on the judgment of the roentgenologist. With greater perfection in lung surgery, it is not too much to hope that removal of the lobe concerned may be possible. In any case, early diagnosis is essential.

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Experimental Sore Throat

In the experiments reported on by Geo. F. Dick and Gladys Henry Dick, Chicago (Journal A. M. A., Oct. 1, 1927), hemolytic streptococci obtained from the skin lesions of erysipelas produced, on inoculation, acute angina in three of five volunteers. The angina were characterized by fever, leukocytosis and the general clinical picture of ordinary sore throat or tonsilitis without the skin manifestations of erysipelas. All of six volunteers inoculated with a filtered culture remained well.

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Dermatological Considerations of Interest

Alfred Schalek, M.D., Omaha, Neb.

Read at sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3-5, 1927.

It is a fact that while medical men keep up with the steadily advancing knowledge in general medicine, this does not seem to be the case with dermatology. An attempt to take care of skin diseases is approached with doubt and usually falls short of satisfactory results. The excuse quite often is that skin diseases come under observation too rarely to become familiar with. Skin diseases are common in daily practice and while they only exceptionally threaten life, they often make it unbearable through disfigurement and discomfort. Looking for a more reasonable explanation I would put the blame elsewhere. One reason is the great number of names, mostly of Latin or Greek origin, which came down through tradition and are continued only because sanctioned by long usage. They are hard to remember and do not impart any information as to the etiology, pathology or clinical appearance. Another handicap is our lack of knowledge of the etiology in many skin diseases without which the treatment must be empirical and symptomatic. Furthermore, the present classification is not based on scientific principles and groups diseases of different nature. One example is eczema. It is probably a distinct pathological entity, but this can not be accepted as fact until it is demonstrated that eczema is due to some specific micro-organism, or to a certain change in the general metabolism or to a bio-chemical alteration of the skin. Its boundaries cover now a great many skin eruptions which do not belong there and will eventually be eliminated. Already they are narrowing down more and more, as for example through recognition of some eczema-like patches of the hands and feet, as being in reality infections with a ringworm fungus. A sharper line is also drawn between eczema and dermatitis, which resemble each other closely at times, but the latter term is reserved for acute inflammatory reactions of the skin to intercurrent internal and external injurious causes.

A correct diagnosis is most important as it will permit speedy relief in some skin eruptions and in others give timely warning of impending serious complications. In tuberculosis, syphilis, the acute infectious exanthemata, diabetes, cardiac disorders and focal infections the earliest manifestations frequently appear on the skin. Most skin diseases may be identified by characteristic features. The interpretation of the type, the duration and development of the predominant lesions, the history of their onset, recurrences, the presence or absence of subjective sensations, family predisposition, all must be taken into consideration to permit the recognition of a given condition. Bacteriologic examinations are often essential and at times the only means for a differential diagnosis, as between tuberculosis of the skin and blastomycosis or between eczema and epidermophytosis. A few skin diseases can be only diagnosed from the microscopical study of the pathologic changes. Laboratory methods are indispensable, but should be considered as an assistance toward arriving at a diagnosis and never out-weigh clinical observations. This is especially true of the Wassermann reaction, which, it should be remembered, is not specific of syphilis, may change with circumstances under which the blood was taken, and also with the technic of different laboratories. Its absence or presence without other confirmatory evidence is no indication of syphilis.

If the etiology is known, the removal of the cause is not only frequently followed by the disappearance of skin diseases, but it also may indicate prophylactic means against recurrences. In some skin

eruptions, such as for example pemphigus and general exfoliative dermatitis, usually more or less generalized and unquestionably systemic, we have no clue to their nature, which renders us helpless. In others, of less serious character, like psoriasis and lichen planus, we cannot prevent relapses for the same reason.

Notwithstanding these handicaps, it is gratifying that most skin diseases yield if taken care of right. The treatment must be based on the knowledge of local indications, and on the knowledge of the action of drugs, and, as a rule, also on general consideration. Wende said that most skin diseases are nothing but symptoms or complications of constitutional morbid states. A dermatologist without a sound training in general medicine must necessarily work within narrow lines. Examination of the blood, including differential count, pressure, coagulability and chemistry; the activity of the organs of metabolism and elimination; the functions of the central and peripheral nerves; habits and surroundings of the patient; all these must be thoroughly investigated because they may play an important role.

Successful treatment is what the patient is most interested in and to which everything else is preliminary. Internal drugs are used only in internal complications. None have a direct effect upon the skin, except possibly arsenic. Local remedies are always called for and the knowledge of a few is sufficient if their action and indication is known. A frequent mistake is to attack a skin disease with strong applications, which generally makes matters worse. A temporizing, mild regime is always advisable at first, because by clearing up accidental and unessential complications and relieving the most acute features a better judgment of the condition becomes possible. A few general directions as to treatment, most of them dictated by common sense, apply to all skin diseases. In profuse exudation, absorbent applications are called for to prevent holding back the secretion. Antiphlogistic measures are indicated in edema and inflammation. Pus must be evacuated and drainage established. When the skin has become infiltrated due to a chronic inflammation, scaling due to an abnormal keratinization or fissured from loss of normal elasticity, efforts must be directed toward restoring the tissues to normal.

Physiotherapeutic measures can be used with great benefit in dermatology, if it is remembered that they are not "cure-alls" and only effective within certain limits. The benefits of the *x*-rays cannot be equalled in several cutaneous conditions. They are valuable in epithelioma of the basal cell type; they shorten the time of the cure of ringworm of the scalp by mechanically removing the fungus through causing temporary shedding of the hair. In old chronic infiltrated patches of eczema, psoriasis, and others they some times achieve results when everything else fails. They have a remarkable influence on mycosis fungoides and on certain kinds of sarcomas and leukemias, causing absorption of the tumors, relieving pain and prolonging life. Actinic rays, or ultra-violet light, have only a slight germicidal action, but their stimulating property is effective in alopecia, acne and other conditions where a sluggish function needs whipping up. Surgical diathermia is destined to take the place of actual and electric cautery. Through coagulation or dessication of tissues it removes growths to any desired depth, at the same time sealing the surrounding tissues and preventing hemorrhages and metastases. Carbonic acid gas, collected under pressure, forms solid snow at a temperature of 80 degrees below zero and if applied with pressure is useful where a mild destructive action without deforming scars is desirable as in lupus erythematosus, in nevi and in similar conditions.

There are many more points which I would like to touch upon, but I shall close with a plea for a greater interest in dermatology by the men in general practice. Dermatology is still in its infancy, but empiricism is steadily giving way to scientific facts. It has been said that a dermatologist should be an internist who knows the skin—it may be asserted with equal truth that an internist is not at his best unless he knows the skin.

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Dooly said—"If we knew a little more we would all be half witted."

Surgical Treatment of A-Typical Hypertrophied Prostate with Prostatic Calculi—Report of Cases

JOHN L. GROVE, M.D., Newton

Read at sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3-5, 1927.

During the year 1926 The Axtell Clinic operated upon three cases of obstructive prostatic hypertrophy with prostatic calculi. In view of the fact that the number of prostatectomies performed in any year in my county, Harvey, is perhaps not very large, I feel that three anomalous cases which I wish to report represent a rather high per cent of cases of this class to have fallen to the lot of any one clinic.

The first case, a carpenter by trade, 62 years of age—family history negative. No personal history of any consequence till 1921, when he began having kidney colic disturbed urination and frequent attacks of distress referable to genito-urinary system. For three months prior to his hospital entry patient had some stomach disturbance—belching, gas eructations and a gradual increasing anemia—some relief of stomach symptoms by taking of soda and history of uncertain food relief. Urinary distress constantly increasing; some stream interference; patient up three and five times each night passing urine with more or less difficulty, but has not resorted to the catheter. Was painfully cystoscoped in a neighboring city by a specialist after which examination he passed several small stones and was considerably relieved. However, the relief lasted only a few months.

Our examinations consisted of the usual general physical examination which revealed a small undernourished anemic individual with no serious organic trouble in stomach, lungs, heart or kidneys. *x*-Ray of bladder and kidney region disclosed no shadows in kidneys or ureters, but in the pelvis the skiagram gave a varyingly dense shadow which we interpreted as a bladder stone. Bladder shows a 2-3 oz. residual retention by catheter test. Cystoscopic examination which was not as per trite dental formula—painless—revealed a bladder not seriously inflamed. Ureteral orifices not ulcerated and delivering a normal output of fair urine. Our cystoscope clicked a stone, but none could be visualized; so our conclusion was that our interpretation was faulty.

The prostate was apparently of medium enlargement with mid lobe protruding well into bladder.

Operative findings: A combined local and ether anesthesia was used. The ether being used only during the final enucleation of the gland.

Bladder was opened in small median incision and thoroughly explored. There was no diverticula. Prostate was enlarged both right and left sides and median lobe. When the urethra was dilated the stones could be felt in the prostate gland. No stones free in the bladder.

After thoroughly dilating the urethra a finger enucleation of the prostate was done. Both the lateral lobes which were each about the size of a lime and the median lobe was filled with hundreds of small calculi which were pocketed in the prostatic tissue.

Photograph of gross specimen shows literally hundreds of fine hard stones throughout the prostatic lobes. One might think if irritation of tissue might predispose to cancer, that here would be the site par excellence for such a growth, but our pathological findings showed scant evidence of malignancy.

Sections through the glandular substance show marked hypertrophy of gland tissue. Interstitial spaces thinned out. No evidence of epithelial proliferation and no breaking through of basement membrane. Interstitial fibrous connective tissue markedly increased. Epithelial cells showed varied staining intensity. One single group of epithelial cells not circumscribed by any capsule or boundary was the only suspicious group of cells found in specimen.

This patient made an uneventful recovery with marked improvement in general physical condition.

Case No. 2—Patient was 76 years of age; his father had died of cancer at 55 and his mother of T. B.; so on hereditary grounds he was due for some dire fate.

For 15 years he had been in urinary trouble; resorting to a catheter frequently during the cold season for the past few years. Three weeks prior to his entry to the hospital he had an acute ob-

struction and was subjected to a cystotomy by an Eldorado surgeon. During past few days the opening had persisted in closing and attempts to catheterize had been so painful and sanguinary that the patient was ready for any sort of execution which might prove decisive and painless. Consequently he was etherized and the previous supra-pubic opening enlarged into the bladder—the prostate was found so much enlarged that its delivery from the bladder after finger enucleation was accomplished after the manner of a ceasarean obstetrical maneuver. The gland weighed 30 oz. and the mid lobe, which almost filled the bladder was the size of a large orange. Within the interspaces of the gland were numerous small stones about the size of mustard seed. Microscopic section of the tissues showed no evidence of malignancy. This patient made a rapid and uneventful recovery, possibly the more rapid because his surgeon, feeling he had removed entirely too much prostate for one man to spare, deserted him immediately after the operation for a vacation trip.

Case No. 3—Patient age 75 had enjoyed strong vigorous health till 1916 when he was subjected to an operation in our clinic for gangrenous appendicitis with abscess. For five years he has been having urinary symptoms, painful and frequent urination, residual urine—occasional attacks requiring the use of the catheter. During the past month the use of the catheter has been frequently required and has been self inflicted. During the past few days some blood has passed at each catheterization. We subjected him to a one stage operation in face of a urine showing persistent low specific gravity and constant albumin—hyaline and granular casts—which to my mind courts disaster. In this case the calamity came late, but certain. He died of uraemia after a complicating apoplexy, seven weeks after the operation

The details of his operation were as follows: The bladder was filled with 6 oz. of sterile water after which the usual suprapubic opening was made. Imbedded in the walls of the bladder and over the mid lobe of the prostate were found 100 or more star shaped calculi of various sizes. These required the utmost patience in removal and produced considerable hemorrhage from the bladder wall in which they were deeply imbedded. The middle lobe of this prostate extended out into the bladder and acted as a ball valve obstruction. It was as large as a walnut. The lateral lobes were each the size of a small orange and were enucleated without difficulty. The usual rubber tube drainage with pucker string suture of catgut was used.

The microscopic sections of glandular tissues showed hypertrophied connective tissue and almost an absence of blood vessels or glandular tissues. Flattened epithelial cells breaking through basement membranes. One group of epithelial cells showed irregular staining reaction but were not encapsulated.

Our 1st and 2nd cases were typical true prostatic calculi, technically called corpora amylacea; our 3rd case was prostatically deposited urinary calculi or false prostatic stones. The etiology of the true prostatic stones interests us. Morgagni has likened them to tobacco seeds and has suggested their presence in the prostate is the result of fused masses of degenerated epithelial cells which have taken more or less deposits of calcium salts as they lay in the glandular spaces. Ziegler suggests that they are connective tissue degeneration and depend for their formative growth on local irritation. At all events they produce stagnation of prostatic secretion and tend to build up much in the manner of gall stones in a stagnated bile flow. Microbic invasion of the gland also has been suggested as an etiologic factor in their formation. In Kretschmer's recent article about 40 per cent of his cases gave a previous history of gonorrheal urethritis.

Frequency of prostatic calculi has been carefully tabulated. Kretschmer in the February Journal of Surgery, Gynecology and Obstetrics reviews 76 cases in detail. Prior to this time 173 cases comprise the entire literature on prostatic stone.

Mayo's Clinic reported for a period of eight and one-half years prior to 1919, 1,355 patients treated for prostatic disease with 20 cases of true prostatic stone, 12 of which were subjected to operation.

Their records show 11 cases of false prostatic stone.

SYMPTOMS AND DIFFERENTIAL DIAGNOSIS

The symptoms distinctive of prostatic calculi are few. Urinary obstruction and residual urination are conditions more or less common to any enlarged prostate. Pain, hematuria and pyuria and passage of calculi are all common signs and symptoms appearing in varying degree in all common types of prostatic inflammation and hypertrophy, so we cannot constantly differentiate along these lines. Cystoscopic examination as in our first case only confused the operator, gave a meager amount of information, and gave the patient an unpleasant reaction.

Hypertrophy and irritability of the prostate of necessity existed in our first case; however, this case, even with the large number of prostatic stones, presented only a moderate degree of hypertrophy and by rectal examination was of the hard fixed nodular feel so often indicative of malignancy, which condition offers the most confusion in differential diagnosis. Our 2nd case had the largest prostate we ever encountered and the stones were in this case limited to the mid lobe and few in number; so one cannot attempt a differential diagnosis on the degree of hypertrophy.

x-Ray possibly gives the only constant and accurate means of differentiating a mass of prostatic stones and should always be employed in routine examination for prostatic conditions.

TREATMENT

Various means of ridding the prostate of stones have been suggested. Massage and stripping the prostate could only have been futile in our cases. Operative cystoscopic removal could only be successful in rare cases. Perineal section into the prostate and curretting out the diseased and stone bearing gland seem to me irrational. All things considered the supra-pubic prostatectomy offers the best means of removal of all the stone infested tissue as well as furnishing a surgical field under full vision.

———R———

Tourist: "Tell me, was every a big man born here?"

Native: "Nope. As far back as I can remember the births have all been of little babies."—Kansas City Times.

Megalogastrica—Chronic Pyloric Obstruction

F. A. Trump, M.D., Ottawa

Read at sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3-5, 1927.

The successful treatment of a grossly enlarged stomach in a chronic patient prompts this brief report.

Mrs. L. P., an Irish lady 38 years of age, was first seen September, 1926. She was complaining of stomach distress, vomiting, loss of weight and strength. Her family history is uninteresting, without evidence of cancer or stomach troubles. She was always well as a child. Never had any stomach difficulties. Married in 1920. No pregnancies because of sterilization.

Patient states that she is sure that she never had any stomach trouble until 1910, sixteen years ago. The symptoms started gradually with distress in the region of the stomach more or less constant and bearing no relation to eating. She had a great deal of gas and sour stomach. She vomited occasionally. Weighed 114 pounds at that time.

In 1918 she underwent an operation for double pyosalpinx and she thought that her stomach trouble grew much worse after that.

In 1919 she entered a hospital in Kansas City, Kansas, where after physical and radiographic examination a diagnosis of ulcer was returned. Subsequent medical treatment at this hospital failed to offer symptomatic relief and she returned home.

She began to have more and more trouble retaining solid food. Was always hungry but after eating was in constant distress until she vomited. Liquids would generally stay down, but even they distressed her. She would vomit large amounts and sometimes food that she had eaten 48 hours before could be seen in the vomitus. No blood was ever observed. In May, 1926, she began to fail rapidly. The distress was now almost constant. Vomited even liquids and was losing weight rapidly.

When she came under my observation she weighed 85 pounds. Was very emaciated. Skin dry and pale. Tongue clean.

Pupils reacted to light and accommo-

dation. Knee kicks present and equal. Radial arteries soft and compressible.

No glands palpable.

Teeth out. Tonsils negative.

Heart and lungs negative.

Abdomen flat and soft. No masses felt. No visible peristalsis.

Temperature 98. Pulse 70.

Blood Pressure—Systolic 90. Diastolic 62.

The urine was negative. (No evidence of a toxic nephritis).

The gastric contents showed no blood. Free HCl 30. Total acidity .40.

She was sent to Dr. E. H. Skinner of Kansas City for *x*-ray examination. Dr. Skinner's conclusions were as follows:

"There is a tremendous eulargement of the stomach outline due to a benign obstruction at the pylorus without evidence of gastric ulcer but due apparently to an old healed duodenal ulcer with cicatricial formation at the pylorus. The condition seems to demand a gastro-enterostomy."

She entered Ottawa Hospital, September 17, 1926. Was kept in bed six days giving her liquid nourishment every two hours. Proctoclysis of normal saline was given each day and retained so that water by mouth and rectum was sufficient to restore body fluids. Gastrict lavage was used.

Dr. R. C. Dugan operated September 23, 1926. The stomach presented itself upon opening the peritoneal cavity. There was no evidence of new growth. The pylorus was obstructed by the scar of an old healed duodenal ulcer which was causing obstruction by the contraction of the cicatricial tissue. A posterior gastro-enterostomy was performed and the patient made an uneventful recovery.

The patient reported back April 3, 1927, for a check up, approximately six months after leaving the hospital. She states that her stomach is absolutely all right, eats anything that she wants and has no trouble. She has gained 45 pounds since her operation. Her weight now being 130 pounds, the most that she ever weighed in her life.

COMMENT

In presenting this case I wish to emphasize two things that are interesting:

1. History.

2. The *x*-ray findings.

1. We were absolutely unable in this case to bring out any history at any time in her life of hunger pain, periodicity, seasonal occurrence or food and alkali ease, four of our time honored and extremely valuable ulcer symptoms. Pyloric obstruction changes the history of the simple ulcer. Possibly the length of time that she had suffered from the disease and the severity of the symptoms during the last years of gradual obstruction had effaced from her memory the beginning characteristic symptoms of the simple ulcer, which she must have had in the beginning of the disease. Her complaint was that of an acute, constant, progressive illness with extreme loss of weight, severe pain at times and vomiting.

2. I am indebted to Dr. E. H. Skinner for the *x*-ray work and the following discussion of the pictures:

ROENTGENOGRAM BEFORE OPERATION

The grossly dilated stomach exhibited a great deal of muscular tonicity. The failure of the duodenal bulb to fill and the large six hour residue are indicative of cicatricial pyloric obstruction. The absence of gastric deformity and presence of duodenal deformity is indicative of an old duodenal ulcer.

ROENTGENOGRAM SIX MONTHS AFTER OPERATION

The patient now exhibits an almost normally sized stomach with good function at the gastro-enterostomy stoma. The pylorus still fails to function. No filling of the duodenal bulb. The stomach is probably only one-fourth the size it was before treatment The stomach now empties in normal time and shows good tonicity.

———R———

Physio-Therapy a Specialty*

J. T. Scott, M.D., St. John, Kan.

Read at the June meeting of the Pratt County Medical Society.

The Council on Physical Therapy of the American Medical Association, Journal A.M.A., October 16th, 1926, has submitted its report on the present status of

*This paper has already been published in the American Journal of Physiotherapy. It is not our policy to reprint articles that have been previously published, but because of the interest in this subject and because the Pratt County Society requested its republication in the Journal, we are making an exception in this instance. (Editor)

Physical Therapy and defines it as follows:

"Physical Therapy is a term employed to define the treatment of disease by various nonmedicinal means. It comprises the use of the physical, chemical and other properties of heat, light, water, electricity, massage and exercise. There are certain definite indications for the use of some one or a combination of several of these physical agencies in the treatment of disease, but to depend on these agents solely, to use them in lieu of better proved methods, or to employ them without having first thoroughly studied the patient from the standpoint of diagnosis, is harmful practice.

"The physical measures that have been found to have certain therapeutic value both by long clinical experience and by laboratory research include heat, natural and artificial, hydrotherapy, light, electricity, massage, therapeutic exercises. Experience indicates that a selected combination of physical measures offers the best results in certain pathological conditions; in other conditions such measures serve as a beneficial adjunct to the usual medical and surgical treatment. Above all, continued treatment by physical measures seems to result in better functional results than when patients are left to their own devices in securing restoration of function. The Council on Physical Therapy feels that the following considerations must receive the most careful attention of the medical profession:

"1. Physics, Physiology and Biochemistry must be called on to dispel the empiricism of the past and to prove the true scientific value of various physical agencies.

"2. Physical Therapy must be recognized as a definite part of medicine, practiced and controlled by graduate physicians. It should be used only as one of the triad of medicine, surgery and physical therapy. It should be prescribed only after careful physical and laboratory examinations of the patient have been made. It should never be prescribed except by a physician thoroughly trained in the use of physical agencies. The treatment of disease, whether by drugs, surgery or physical agents belongs solely in the realm of medicine, yet many physicians may refer patients to technicians, masseurs, gymnasts or nurses who have received training in physical therapy, or even to members of various cults, for physical therapeutic treatment. Therefore physical therapy must be recognized as a component part of medicine, and patients requiring this type of treatment should be referred only to physicians trained in this specialty. In this way the use of these methods by charlatans will be largely eliminated.

"3. A subject as intricate as physical therapy requires more study than a salesman's assertion that the snapping of a switch or the pressure of a button will definitely assuage any pathologic change."

The main purpose of this paper is to emphasize the truth of this statement. We are well aware that physio-therapy had its opportunity and demonstrated its worth during the World War. It is, therefore, our most modern therapeutic agent. Comparatively few physicians know anything about it, one reason at least being that such information was nowhere available. However, medical schools are adding facilities to give instruction in this department which will provide physicians of the future with adequate information. Scores of manufacturing concerns are turning out modalities in great number and variety and are interested of course in disposing of them to physicians, in the main general practitioners, as they are most likely to show an interest in such equipment. These manufacturing concerns, many of them conduct classes monthly of a week duration and supply instructors to teach the use of their machines. Little more than a slight conception of fundamentals can be acquired through such sources and it lacks a great deal of turning out scientific physiotherapists. It is important that the profession should recognize now the truth of the statement already made that physiotherapy is a specialty and in the same sense as surgery, ophthalmology, otology, radiology, etc. Where is the general practitioner who would think of entering upon the practice of either of the above mentioned specialties without adequate preparations? And yet the attempt is made daily, through representa-

tives of manufacturing concerns to convince the prospective purchaser that all he needs to become a scientific physiotherapist is to install their machine and press the button. The sole purpose of such propaganda is to sell equipment and no thoughtful physician will be led astray by it.

If it be true then that physiotherapy is a new specialty and that time is required to train physicians to scientifically administer it and if it is a valuable therapeutic method, how is it to be made immediately available?

My answer to this question is the second purpose of this paper. It has already been stated that the general practitioner is the one solicited to install physiotherapy equipment and with the solicitation is the intimation that the equipment is fool proof and automatic, in other words brains are not needed in its use. If such an extreme statement be true there yet remains a very evident reason known to every general practitioner, why he can not use it successfully. The only regular thing about a general practitioner's life is its irregularity. He is on duty and subject to call anywhere twenty-four hours in the day and seven days of the week. He may advertise office hours, but if he receives a call during those hours he abandons his office and answers the call. You may reply that this would only be necessary in emergency calls, but I reply that any call is an emergency call to those making it. Now under such well known and unalterable circumstances how would it be possible for a physician to continue in general practice and simultaneously administer successfully physical therapy? The general practitioner is so called because he is ready at all times to respond to calls in general, an important field of medicine, but its demands are irregular and the time element an unknown quantity. Exactly the opposite is true in the practice of physical therapy. Here the demands are regular and the time element a known quantity. In the not distant future all graduates of medicine will be trained to administer physical therapy but even then it will not be practical for the general practitioner to be at the same time a successful physiotherapist. I think the above statements are absolutely true and the sooner they are recognized the better for general medicine and for physiotherapy. I repeat that physiotherapy is a specialty, the third leg in the tripod of medicine, surgery and physical therapy, and the general practitioner can not absorb it for the very evident reason that it is not possible to succeed as a general practitioner and a specialist at the same time. I am aware that many physicians are attempting to cover a double field but I also think that the invariable result is mediocrity.

What, then, is the rational solution of the problem? For it is evident that a solution is desirable. The solution is the same as that applied to any other specialty namely, that this department be occupied by those physicians who are qualified and equipped or who shall qualify and equip to scientifically practice physiotherapy. Only a small proportion of physicians will care to make the sacrifice in time and labor and assume the expense necessary. The item of expense incurred in the proper equipment of a modern physiotherapy clinic is no small item, in fact it equals or surpasses that incurred in the purely surgical equipment of a modern hospital. It is to be recognized that no physiotherapy clinic can render satisfactory service with one or two modalities. There is at least a minimum of modalities required below which satisfactory service can not be rendered. In some cases one only will be indicated while in others a combination of several may be required. It would be as reasonable to practice medicine with one medicinal agent. In order that the expense involved and the knowledge required in the operation of a clinic of minimum equipment be realized I shall itemize the modalities required and their approximate cost. The minimum equipment, according to physiotherapists generally, consists of *x*-Ray, High Frequency, Morse Wave Generator, Ultra-Violet Air Cooled Lamp, Ultra-Violet Water Cooled Lamp, Infra Red Lamp, Radio Vitant Lamp. Now this is a somewhat formidable equipment and costs approximately $4,000, yet it is the one of minimum requirement. Beyond all this, and of infinitely more importance thar

the expense involved, is the diversified knowledge required. One must be at least an amateur photographer, must be familiar with the fundamental physics of *x*-ray and high frequency, must know authoritative technic or be capable of devising it, must be familiar with light physics, at least sufficiently to use it so as to produce the desired reaction, must be an efficient diagnostician and, last but not least, must be willing to work. If this specialty then is destined, as I think it is, to fall into the hands of physicians who are qualified and equipped it will call for the establishment of clinics to which suitable cases may be referred. Already there are a few such but there is need for many more. No hospital deserving the name will be without a physiotherapy department in the near future. Heretofore hospitals have been built for the purpose of affording relief in cases requiring operative measures and that will no doubt continue to be their main purpose but it is also true that an enormously increased number of people are in need of proper nonsurgical treatment. If physical therapy offers improved methods of treatment then it is to the interest of the profession and general public that such methods be made available. In as much as it is not practical for a physician to do general practice and also physiotherapy it becomes necessary that he have a convenient clinic to which his cases may be referred as they are in surgical cases.

There is a law in Kansas whereby any county can vote funds to build a county hospital. A goodly number of our counties have already availed themselves of this privilege and many more will do so in the future. Where such hospitals are already constructed they should be equipped to administer physiotherapy and those yet to be built should be so equipped.

It will be a long time, however, before every county in the state provides itself with a hospital. Until such time arrives it will be a laudable effort on the part of any competent physician to provide a place in his county where real physiotherapy is available. There are the same reasons for referring cases requiring physical treatment that there are for surgical cases. The physician who refers surgical cases does so mainly for two reasons, first because he hasn't the facilities and equipment and second because he is not a surgeon. The same reasons apply with equal force in cases requiring physical treatment, with the added comment that where there is one case needing surgical treatment there are hundreds of cases needing physical treatment the results of which will very often obviate the necessity for future surgical treatment.

Physiotherapy is a specialty that, in one respect at least, differs from all other specialties. Its methods are Nature's methods and its primary aim is to initiate such methods at the earliest opportunity when it is yet possible to repair damaged tissue and restore impaired function. The idea that physical therapy has its main use in chronic conditions that have failed to respond to every other known method of treatment and in very severe and deformed cases of injury is positively erroneous. While it is true that in such cases, where it becomes a dernier resort, it often produces results that border on the marvelous, it is also true that when used early in beginning pathological processes the results are equally gratifying and more likely to remain permanent. It is manifestly unfair to judge physical therapy when it is tested only at the gate of the cemetery, yet there is where, during the World War, it met the test which resulted in forced recognition from the profession. It deserves and is destined to receive a thorough test under fair conditions early in disease processes when there is reasonable hope that what nature may fail to accomplish unaided may be realized through the aid of physical means.

It is probably not possible and perhaps not desirable that every doctor in active practice at this time be required to qualify as a competent physiotherapist and make the considerable financial investment necessary. It is necessary, however, that every doctor inform himself as to the merits of this new specialty and where it is indicated see that his patients receive its benefits It is most unfortunate and a matter for deep regret that doctors, it would seem, from time immemorial, have been possessed with the idea of profes-

sional competition rather than professional co-operation. Such a view is obviously wrong and is responsible for most of the difficulties confronting our profession now. Cults, isms and all the horde that infest the border line of quackery are its results. When will we learn that "In unity there is strength," and that "A house divided against itself can not stand?" Let us dismiss our petty jealousies and become so busy admiring the good qualities in our confreres that we shall have no time to see their faults. When that time comes our only interest will be to give our patients the best service of which we are capable and when we are convinced that a service is needed which can be given by one more competent and better equipped that service will be made available at the earliest moment.

I can perhaps not do better in concluding than to reproduce the last section of the introduction to Sampson's work on Physiotherapy Technic which is as follows: One of the outstanding therapeutic lessons learned from the reconstruction experience was that physiotherapy has a great deal more than made good and is destined to be the salvation of therapy, that it is an indispensable part of medical and surgical practice; that it is not a separate cult or ism but can do its best work only in institutions such as general hospitals or in group practice where expert advice from all angles can and will always be given; that it is a very large and special field, so large that I never expect to live to see the limits reached and requires special training and experience and much more time than can be given to it by men following other specialties at the same time.

———R———

Vomiting of Pregnancy

Howard E. Marchbanks, M.D., Pittsburg

Read before the Jasper County, Mo., Medical Society, April 14, 1927.

It is perhaps possible for a toxemia due to pregnancy to exist in the early months but I have been wondering if toxemia of pregnancy is not wrongly diagnosed in a great many cases. By toxemia one would expect a poisonous substance to be given off from the products of conception which going into the system would cause a toxemia.

The thing that really happens is this: one of two conditions takes place. First, if the patient takes small amounts of food and vomits, say 8, 10, 12 or more times daily, she is going to keep practically the whole amount of the acid of the stomach from getting into her system. Just what relation this has to the alkali reserve of the blood we are not going to say but evidently the acid that is secreted by the stomach must come from some place in the body and it is reasonable to assume that this acid comes indirectly from the blood which we know nourishes every organ in the body. At any rate as the stomach empties itself of the gastric juices by vomiting instead of by allowing the gastric juices to go into the intestines, the alkali of the blood raises as the acid is cut down and the CO_2 is found to be 80, 85, 90 or more volume per cent and the condition known as alkalosis is present. Along with this is starvation which is the extreme condition because it is no easy matter to replenish the acid to the blood. The means at our command will be discussed later. On the other hand if the patient refrains from eating because she is afraid she will vomit or merely vomits her meals, leaving the greater part of the acid to empty normally into the intestines one has a pure and simple case of starvation acidosis and the CO_2 will be found going downward.

In the past eight years a lot of literature has been written on this very interesting subject. It is therefore quite reasonable to surmise that I will not bring to you anything especially new. However, being interested in the clinical aspects of blood chemistry I have studied numerous severe cases of pernicious vomiting from this standpoint as well as several late cases of toxemia of pregnancy.

I will attempt to give a short review of the work done by the men who have been working more or less intelligently on this condition for the past eight years. In the J. of A. M. A. for May 8, 1926, E. L. King of New Orleans has given quite a full review of the subject especially from the glucose treatment viewpoint.

It is interesting to note in DeLee's Obstetrics[1] which was reprinted in 1920, that he gives four main causes for pernicious vomiting.

1. Those in which the vomiting is a reflex from the genitalia.
2. When it is due to some disease of the stomach, some abdominal disorder or abnormal condition of the blood.
3. When the nervous system is at fault.
4. When the general metabolism is disturbed, the clinical picture being that of a toxemia.

He states also that *toxic* vomiting cases pursue a more rapid course without much emaciation and death results, not from starvation but from the profound alterations of the general metabolism. I quote this only to show the trend of thought at that short period ago.

The cause as yet is not definitely known but it is known that most of these people if isolated from the family and put under a careful regime of feeding will almost immediately improve. They may retain their morning sickness but their vomiting ceases almost immediately when seen early. I, therefore, feel that starvation is the whole cause of this disease and that the toxemia, so called, is the result of starvation with a resulting acidosis or alkalosis and not necessarily from the products of conception at all.

About 1920, Allen B. Kanavel, a surgeon, first suggested the feeding of these patients through the duodenal tube. At about the same time Portis and Paddock reported three cases treated by feeding with the duodenal tube. This method has been used quite extensively since that time.

In 1920, Titus, Hoffman and Givens[2] first reported the use of glucose solution intravenously, as a treatment for vomiting of pregnancy. They also tried to prove a carbohydrate deficiency feeding as the cause of the vomiting. At that time they reported 76 cases treated, most of them successfully, with a high carbohydrate diet. These cases were divided into three groups. The first group were mild cases and responded quite readily to frequent high carbohydrate feedings by mouth. The second group, moderately severe; the third group, those that would be classed as pernicious. The latter were emaciated and food was being retained by none of them. Titus, again in 1922,[3] and still again in 1925,[4] reported other series with equally gratifying results.

In August, 1923,[5] William Thalhimer of Milwaukee, first reported the use of insulin with intravenous glucose in postoperative acidosis. In March, 1924,[6] he reported three cases of pernicious vomiting treated with insulin. He uses only a 5 per cent glucose, giving it slowly in 1000 c.c. quantities while Titus uses 25 per cent in 300 c.c. of water.

There has been quite a friendly argument between these two workers. In the J.A.M.A. of March 27, 1926, page 970, the last answer that Titus has given to Thalhimer is presented.

I am quite in accord with Thalhimer, believing that the results are quicker when insulin is given before the glucose is administered. It is known that the normal threshold for blood sugar is 180 mg. per 100 c.c. of blood. When this threshold is reached, sugar will tend to spill over into the urine. The object then in giving insulin is to keep this threshold from being reached. Insulin does this by forcing the glycogen out of the liver into the tissues and allows the sugar which is accumulating in the blood a chance to be stored rapidly in the liver and forced again into the tissues. This is done at a much faster rate with injected insulin than with the supply of natural insulin alone. I, therefore, administer 20 or 30 units of insulin for 75 gms. of glucose and believe that it saves the sugar from being wasted in the urine When 75 grams of glucose are given intravenously without insulin about seven grams of sugar will be found in the urine while if insulin is given in a large enough dose, one unit for each 2½ or 3 gms. of glucose, less than two grams of sugar are found in the urine. Titus argues that insulin is dangerous and that it should therefore not be used in any toxemias of pregnancy. This argument is quite weak also for it is known quite well how to handle insulin now so that it is no more harmful than any other drug if used judiciously. This covers fairly well the arguments on the subject up to the present.

Very little has been said about acidosis

and especially alkalosis in regard to vomiting of pregnancy. Thalhimer in his article in the Journal of March, 1924,[6] reports the alkali reserve in two of his cases but the lowest CO_2 was 38.5 vol. per cent. I think all of these workers have failed to call our attention forcibly enough to the outstanding diagnostic and prognostic findings in these patients by laying too little stress on their alkali reserve.

As I previously stated, if the patient has lost all her free HCl by vomiting so that none of it has gone into her intestines there is a lowered acid content of the stomach and the alkali of the blood is raised. An alkalosis results as is demonstrated by a high CO_2.

Hayden and Guffey,[7] of the University of Kansas, first reported this condition in pernicious vomiting in October, 1924. Later in 1925,[8] I reported a similar case which I will mention briefly later. The subject of alkalosis is well discussed by Dr. Arthur F. Chase of New York in the Medical Clinics of N. A. for September, 1925.

If the HCl has not been lowered in the stomach by a constant vomiting but is carried on into the intestines with only a starvation produced there is a gradual lowering of the alkali reserve and the CO_2 is reduced until as it reaches 25 vol. per cent when an acidosis is present. As it goes lower coma will follow as in diabetes mellitus, etc.

It has been recommended for some time, especially by Dr. Whitridge Williams, that women suffering from morning sickness eat two crackers before arising in the morning. This was added to by Titus, et al,[3] in their paper which they suggested the carbohydrate food deficiency as the cause of the disease. They suggested the following dietary:

7:30 a. m.—2 soda crackers.

8:00 a. m. Breakfast—Stewed prunes or baked apple; oatmeal, cream, sugar; chocolate with sugar; toast, two slices; honey.

10:30 a. m.—Toast, two slices; milk.

12:30 Lunch—Cream of celery soup or potato soup; 4 crackers; bread and butter, 2 slices; lettuce; custard, cornstarch, apple tapioca, ice cream or gelatin with cream and sugar.

4:00 p. m.—Tea with sugar; toast; sponge cake.

6:30 p. m. Dinner—1 cup cream of pea soup; 2 crackers; toast; baked potatoes; carrots; dessert as at lunch.

9:30 to 10:00 p. m. Supper—Bread; milk.

I think this is quite a satisfactory diet for these patients.

When these patients are seen by me they are classed according to their history and findings into three groups—mild, moderately severe, and severe.

The mild cases are the early cases that are losing their breakfast and occasionally other meals. They have lost no weight and their urine and blood findings are normal. They are put on the diet as outlined above and told to repeat their breakfast or any other meal that they vomit within 45 minutes. If this second meal is lost to again repeat it in 45 minutes. They are told to take as many meals daily as is necessary to retain three good meals. It is surprising how few women will need to take more than two or three extra meals until they are practically well.

The moderately severe cases are the ones who have been losing practically every meal for various lengths of time from one to two weeks, with a few urinary findings and with the CO_2 about 30 vol. per cent. These are the people that need to be put into the hospital at once for they need constant watching They are given 20 units of insulin followed in 10 or 15 minutes by 75 gms. of glucose, and 23 grains of sodium bicarbonate in 300 c.c. of distilled water, intravenously. They are given 600 c.c. of 3 per cent glucose subcutaneously and as much 5 per cent glucose and 2 per cent sodium bicarbonate by proctoclysis as they will retain. Their stomach is washed out and then rested for 12 hours; then soft food is added and within 24 or 36 hours they are put on the outlined diet plus some meat in the form of swiss steak or other meat that they are fond of. Soda pop is very acceptable to them and they very seldom lose many of their meals although occasionally they have to repeat six or eight meals in all. We repeat the intravenous glucose and insulin once or twice daily

until the CO_2 is normal and until the symptoms are cleared up.

The severe class is of two types. First —those that are in acidosis and Second— those that are in alkalosis.

In the first we find a CO_2 of 12 to 25 vol. per cent. This patient has perhaps been vomiting without retaining a meal for three or four or more weeks. She has perhaps taken medicine of most every kind from her family physician and he has told her that the only thing left is a therapeutic abortion. By chance some one gets them to me for consultation and they are usually quite emaciated and dry. They look sick, face flushed, mouth and tongue dry, etc.

These patients are first given a cleansing enema. I then give them at once the insulin and glucose as described above and get them on a two hour feeding schedule quite early

In case the CO_2 is high and an alkalosis exists the problem is more grave. I will discuss this by presenting a case.

Mrs. C. P. C., Hospital No. 4203. Patient came into Mt. Carmel Hospital at 3:30 p. m., June 14, 1925, with the complaint of vomiting with pregnancy. On entrance her temperature was 103.6, pulse 140, respiration 40. This was her first pregnancy.

Her past history was not remarkable. Family history was negative. None of her relatives had experienced a similar condition. Her last menstruation had been March 10, 1925, and she had vomited since about April 15. Had kept down some fruit juices and soup the last few days but the amount was not appreciable. She had been running fever for two days before entrance. She had been having light twitchings over body for the past 12 hours, more or less rhythmic in time. She complained of some pain in lower right quadrant and some headache. She had been in bed more or less for eight weeks but constantly for four weeks. Had taken various medicines without help.

On physical examination I found a fairly well nourished young married woman of 25 years. Had appearance of one sick with fever for several weeks. Pupils small, reacting sluggishly to light. Mouth, tongue and lips dry with caries on lips and gums. Teeth in fair condition, throat dry. Thyroid and cervical glands not enlarged. Heart rapid but no enlargement or murmurs. Lungs normal. The blood pressure was S-120, D-60. Liver and spleen not palpable. No masses palpable except uterus was enlarged to about the size of 12 weeks pregnancy. There was no discharge from vagina and no show on examining fingers.

Examination was otherwise negative except the laboratory findings. The urinalysis was normal except a few pus cells were present 3,820,000 red cells, 70 per cent haemoglobin, 9,100 white cells with 80 per cent polymorphonuclears. Her blood sugar was 133 mg. per 100 c.c. of blood. The CO_2 combining power of the blood plasma was 85.7 volumes per-cent. The chlorides in the blood were not determined on entrance.

Due to her dehydration we ordered at once, 600 c.c. of 3 per cent glucose by hypodermoclysis. An enema was given immediately as well as a gastric lavage. 600 c.c. normal salt solution were given that night by hypodermoclysis. After learning that the blood plasma CO_2 was 85.7 vol. percent we realized that an alkalosis existed. 1600 c.c of 3 per cent salt solution were therefore ordered for the next 24 hours to be given at 6 hours intervals by hypodermoclysis. A single gastric analysis at 60 minutes on the second day of entrance gave a total acid of 29 degrees and no free HCl.

After the first 24 hours the temperature began to go down and was normal on the fourth day. We continued to give her about 2000 c.c. of salt solution by hypodermoclysis daily, for 5 days. After 48 hours, June 16, 1925, the CO_2 tension was 76.8 volume percent. On June 17th the blood sugar was 80 mg. per 100 c.c. of blood and the blood chlorides were 520 mg. On the next day the CO_2 tension was 57.9 volume percent and with her temperature down we began to feel fairly hopeful.

We gave her glucose per rectum in fairly large amounts and some by hypodermoclysis but not until June 25th did we give her glucose intravenously. Here we gave her 30 grams every 6 to 8 hours in distilled water, using 15 per cent solution. We also gave her 10 units of insulin immediately following the glucose.

Our salt solution was discontinued because on the 25th the CO_2 was still 59.8 vol. per cent and by June 30th it was 61.7 vol. per cent with the chlorides up to 570 mg. Her legs and breasts became so sore we had to discontinue the hypodermoclysis and by July 6th the CO_2 had raised to 76.8 vol. per cent with the chlorides still at 610 mg.

We had tried various means of getting carbohydrate food into her. She would hold it down fairly well for a few hours and though we tried every scheme we knew she would eventually vomit practically all she had retained. The duodenal tube could not be introduced into the duodenum.

Her red cells were down to 3,000,000 with 55 per cent haemoglobin, so on July 1st we gave her 570 c.c. of blood by the syringe method. Very little help was received from this and on July 3rd the red cells were still about the same She was losing in spite of all we could do and was getting discouraged as was the good husband who had helped in every way that he could with the care of her. On this date we dilated the cervix and put a pack in the uterus which we removed the next morning. She passed the foetus next day and we removed the placenta. She still lost ground and we again transfused her on the 7th but she died the same day. Autopsy was not obtainable.

The next case which I will report briefly was the first severe case I had ever seen.

The patient was a young married woman, 28 years old who came into Mt. Carmel Hospital April 4, 1921. She had menstruated only once after her marriage. She was very much disappointed because she had become pregnant so soon but since she was pregnant she said she was determined to go through with it.

When I was called I found her quite undernourished so had a special nurse come to feed her. I told the nurse to give her liquids at frequent intervals but to not try any solid food for a few days. At first she did fairly well and kept down her liquids and some solid food.

After a week the nurse was discharged and I made no more calls but I left word to be called if she did not do well. A week later I was called to find she had taken very little if any food since the nurse had left. Consultation was then called, for I thought the girl was trying to starve herself. At this time diacetic acid and acetone were both found in the urine, also albumin, hyalin and granular casts and pus cells. The consultant felt as I did, that abortion was indicated, but the patient said she was not going to die and wanted to wait. We waited but sent her to the hospital so if she did not clear up she might be ready for immediate delivery. Soon after coming to the hospital a friend suggested some local treatments which were allowed but the patient went into coma on the 4th day and we gave her glucose solution intravenously because we had given it to diabetics in coma. She got better after getting it and when she came out of her coma we began to bring food to her and from then on she seldom lost a meal. This was my first experience with intravenous glucose in this type of patient, but I have used it in all severe cases since.

We were not doing blood chemistry at the hospital at that time but dare say her CO_2 was quite low.

I will report one of our later cases. This patient would be classed in the moderately severe division but was approaching the severe class. Her physician had advised therapeutic abortion. She was sent to us from another city in an ambulance for the abortion but we advised against it after getting her history and findings. This put one in a rather peculiar position but I believe one should do what his judgment tells him is right when abortion is considered, especially if one has every reason to know that he is right from physical examination and laboratory findings.

This patient, Hospital No. 5953, came into Mt. Carmel February 1st, 1927. She was 22 years old. She was 3 months pregnant. She had one child nearly 4 years old with which she was nauseated but not so severe as this. Had always been well at other times. She had retained food quite well until Christmas. Since that time she had eaten practically nothing. Thoughts of food made her sick. Tried to drink water but it soon came back Had some headache and backache.

Had lost about 15 or 20 pounds since she had been sick.

Except for slight paleness the physical examination was negative. Uterus about the size of 10 weeks pregnancy. Her urine was not bad, trace of albumin and acetone. Her CO_2, however, was 31.5 vol. per cent. She received the usual insulin, glucose and sodium bicarbonate intravenously, subcutaneously and by proctoclysis and on the next morning her CO_2 was 46.7 vol. per cent. She began to eat on the same day and left the hospital on the 8th day on a full diet and feeling fine.

We had one patient in September, 1926, that had lost 2 previous pregnancies with pernicious vomiting whose CO_2 on entrance was 31.9, that cleared up and carried through. Just left the hospital three weeks ago with a beautiful girl baby. She said it seemed too good to be true.

Before concluding my remarks I wish to present two other cases of pregnancy, one of which I term a true toxemia of pregnancy, while the other will be run in the "too late to classify" column. I will give the doubtful one first.

The patient, Mrs. C S., Hospital No. 4059, a young married woman 19 years old, came into Mt. Carmel Hospital May 1st, 1925, with convulsions which lasted about 90 seconds. She had a severe headache immediately following each convulsions. She first took sick 3 days before about 4 p. m. with pain in her head and pain in right side. About 2 o'clock next morning her husband was awakened and found her in a convulsion. She was six and one-half months pregnant. She continued to have these convulsions from 3 to 6 in an hour until she was brought into the hospital three days later. All this time she had complained of the pain in her head.

I saw this patient first after she was brought to the hospital in consultation with Dr. McKelvey and Dr. C. A. Smith of Pittsburg. Her past history revealed that she had one child living and well at 10 months. She had complained of headaches at times but otherwise had gone through her pregnancy quite well.

On examination we found a rather poorly nourished pregnant woman with temperature 99, pulse 102, respiration 20. Eyes react sluggishly to light. Pupils dilated while in convulsion but contracted when out. When she has a convulsion the head is drawn, the arms and feet are also drawn. The rest of the examination was not remarkable except the cervix was quite soft and easily dilated. Skin was dry and showed marked signs of dehydration. Babinski and Oppenheims signs both positive on left.

The urine showed some sugar acetone and pus cells. The blood showed 22,000 white cells, 88 polys. Spinal pressure normal and the fluid was negative except for 187 red and white cells that might have been partially due to the puncture. The blood chemistry was normal except the CO_2 was a little low. 35.3 vol. per cent and uric acid 3.5 mg.

We thought it advisable, due to the fact that the cervix was ready to dilate and due to the fact that she was having so many convulsions that she should be delivered so an easy version was done on the 2nd day in the hospital. The baby lived only about 2 hours.

The nurses counted the convulsions during various periods. Following delivery she had 33 convulsions in eight and one-half hours. The next day they were very frequent. On the 4th day she had 43 in 3 hours and 45 minutes. On the 5th she had only 2 minute intervals between convulsions all day long. On the 6th she had 58. On the 7th, 27. On the 8th, 34. On the 9th, 8 and that was the last. She had no more convulsions and was dismissed on the 13th feeling well.

Her temperature varied from 100 to 105 degrees per axilla. We gave her glucose intravenously and subcutaneously. We forced all fluids and foods by mouth that we could. She was also given plenty of calcium. We did not know about giving magnesium sulphate intravenously which would perhaps have turned the trick immediately along with glucose intravenously.

The second patient is a case of pregnancy with acidosis and convulsions in a 19 year old married woman. Mrs. E. C., Hospital No. 4754, fell to the floor in a convulsion on day of entrance, December 22, 1925. She had 5 or 6 more convulsions while coming to the hospital.

The physical findings were not remarkable. B.P. 140-70. Cervix was obliterated

with 2 fingers dilatation. Face was bloated and legs were swollen. Urine was full of albumin and casts. Blood uric acid was 9.75 mg. Urea 27.9 and CO_2, 12.6 vol. per cent.

She was immediately delivered of twins, 6½ and 7½ pounds by version. Both babies were in good condition. Patient continued to have convulsions after delivery. Albumin and casts were constantly present in large amounts. She was, however, given large quantities of glucose and sodium bicarbonate, intravenously and subcutaneously.

She remained unconscious from Tuesday until Friday, on Friday she answered a question or two. By Sunday she was quite conscious and began to take fluid and food. She left the hospital in good condition on the day the twins were 13 days old. Her CO_2 on the 7th day was 57.2. She reported at intervals until the urine was free from albumin which was about 8 months. This patient was brought into the Mt. Carmel Hospital and delivered by Dr. Hawthorne of Mineral. He also worked with me on the case.

I wish to state before I draw my conclusion that Walter E. Levy of New Orleans has reported the observation of the lowered CO_2 in these cases of vomiting of pregnancy. His recent article appears in the American Journal of Obstetrics and Gynecology for December, 1926.

CONCLUSIONS

1. Vomiting of pregnancy if seen early can usually be controlled by forced feeding of a general diet without greases and fried foods.

2. The intravenous use of glucose, 74 grams in 300 or more c.c. of water, daily or more often gives to the starving liver a good supply of food.

3. Insulin perhaps helps to conserve the glucose although this is not definitely proven.

4. Pernicious vomiting of pregnancy is due to starvation resulting from a physiological vomiting that has not been controlled.

5. The alkali reserve of the blood is the best index to follow in the treatment of these patients.

6. Vomiting of pregnancy is not a true toxemia such as is found in the later months of pregnancy.

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Trench Mouth and Antitoxin

George W. Davis, M.D., Ottawa

On Friday afternoon a young man was brought to my office, in great distress, suffering a very general depression. His temperature was 100°, pulse 100, respiration 20. Sublingual adenitis, quite marked and painful.

Patient came from the hayfield where he had been working for the past week, and said he had been working with a road improvement gang for the preceeding month.

I was not able to make a diagnosis satisfactory to myself, but decided to send him home to bed and clean up, diet, eliminate, reduce the temperature, slow and strengthen the heart and observe him.

The next day found the patient quite comfortable. Physical manifestations about normal, but sublingual adenitis more marked. Antiphlogistics were resorted to and much amelioration of the distress arising from the swollen glands was experienced.

Sunday morning the patient was quite content but complained of a soreness in the gums, and speech was impeded. The same expectant measures were continued and Monday morning found the patient without constitutional disturbance but with aggravated symptoms of sore mouth. Speech became more difficult and swelling of gums extended up around the teeth.

Tuesday the swelling was increasing, pulse, temperature and respiration rising. Tongue was very broad and the whole organ very white. Patient was refusing nourishment and the outlook was generally bad.

I called into consultation Dr. J. R. Scott. This was Tuesday afternoon, and the mouth symptoms were becoming very aggravated and constitutionals worse.

It was Dr. Scott's opinion that the patient was suffering from a proliferation of fusiform bacillus of Vincent's angina, called "Trench Mouth."

We did not fail to consult whatever authorities we could find at hand and did institute such treatment as we found was routine with the dental profession and our own.

Tuesday night, or rather at 1 a. m. Wednesday, the family called me to the home and I found the patient delirious and apparently quite near impending collapse. I feared the heart would not sustain the flagging vital forces and as a dernier resort, for the horse serum it contained, I gave the patient 10 thousand units of diphtheria antitoxin, and remained with him until morning.

By the noon hour of Wednesday the patient was noticeably improved, and afternoon I called further counsel, Dr. H. H. Gilley, and Dr. F. A. Trump. Smears were taken, and especial care was had to determine if we had a mixed infection, Klebs Loeffler and Vincent's. In a few hours Dr. Trump reported bacillus of Vincent's angina, only, and verified the diagnosis of Dr. Scott.

Thursday morning I gave 10 thousand units of antitoxin, though all the symptoms were abating and so continued all of Thursday. Friday morning, one week after the onset, I gave the last 10 thousand units of antitoxin, and Saturday morning 5 thousand more, and on Sunday the patient sat up to the table and ate quite well, and though I kept oversight of him during the week, saw no relapse of symptoms. He made his last visit to my office on Friday the 23rd, two weeks after the onset of the attack of "Trench Mouth."

Now where or how he got it we do not know. Why I blundered on to the treatment was on account of the utility of horse serum. What it did for the patient was quite plain, and inasmuch as I now learn that there are quite a number of cases of Vincent's angina in the state all the time I offer my experience for what it is worth to these sufferers.

KANSAS MEDICAL LABORATORY ASSOCIATION

Interpretation of Laboratory Reports

J. L. Lattimore, M.D.

There seems to be much misunderstanding relative to the interpretation of the different laboratory reports and I feel that an explanation of some of these reports would result in a better co-operation between the physician and the pathologist.

In the beginning let me say that a negative laboratory report, as a rule, means very little or nothing. The examination of any specimen by the laboratory worker and the report of negative findings merely means that the worker is unable to find the bacteria, substance or cell that is being looked for. Certainly a negative report on a throat smear or culture does not mean that the patient does not have diphtheria, it merely means that diphtheria bacilli are not found. A negative report for tubercle bacilli from sputum does not mean that the patient does not have tuberculosis, it merely means that the worker is unable to find tubercle bacilli in the sample submitted. A negative Wassermann means little, for ti is a well known fact that a patient suffering from syphilis may give a negative Wassermann; first, if the case is so early that the reagin is not yet present; second, there may be too little reagin present to give a positive; third, a false negative is obtained after the ingestion of alcohol; and fourth, if the case is one of long standing infection. In practically all laboratory work, we are looking for and endeavoring to obtain positive results. Several repeated negative tests in certain cases may be of value, but certainly one negative is of little value.

In many cases the time factor is important and one to be considered by the physician in the interpretation of the different laboratory reports. Even in doing the routine blood count, it must be remembered that the intake of food will slightly increase the leukocyte count. Certainly it is extremely important to remember that blood for blood chemistry should be collected at least several hours after a meal. Often the blood sugar will

show an increase of from 25 per cent to 75 per cent when the blood is collected a few minutes after a meal, compared to a test several hours after a meal. A rule that is best to follow in collecting blood for blood chemistry is to collect the blood in the morning, before breakfast. Many times we obtain a reading on a Wassermann as anti-complimentary, which merely means that our control tube is cloudy and we are unable to read the results; it does not mean either a positive or a negative, and many times this result is obtained because of the presence in the blood of chyle, which is thrown into the blood stream at the time of eating, so collecting the blood soon after a meal for a Wassermann often gives unsatisfactory results.

The choice of the test desired also is an important matter for the physician to consider. Often I have been called to make a certain kind of a test when I felt sure that some other laboratory procedure would be of more benefit and would give more information about the case. A Widal on a possible case of typhoid fever does not give a positive reaction early in the disease. The Widal, being an agglutination test, depends upon the presence in the blood stream of agglutinins. On the other hand a blood culture should show a positive culture of typhoid bacilli from the initial symptom. Several times I have been called upon to do a Wassermann, as the first laboratory test, in a case with general glandular involvement, which proved later with a blood count to be a case of leukemia. There are few physicians now that depend upon the urinalysis as a guide in the care of a diabetic patient, for the use of blood chemistry is almost universal at present and blood sugar is used as a guide to the condition and care of the patient. But, surely, the choice of which laboratory test is indicated in a given case is important.

I am sure that the physician who depends entirely upon the laboratory to make a diagnosis is doomed to trouble. I am also sure that the physician who never uses it is doomed to more trouble. I would like very much to impress upon you the importance of correlation of the clinical picture and the laboratory findings, not depending altogether upon the laboratory findings, *x*-ray, temperature, pulse or any one symptom, but putting all together to make a clinical picture. A physician, being well grounded for his diagnosis, may discard an atypical temperature, laboratory findings of certain kinds, for I would have you compare the laboratory findings to a symptom. In a given condition, the patient should give a certain laboratory finding, but failure to give this would not exclude the disease. Also a certain condition, for example, appendicitis, should give us a temperature, but failure of the patient to show this temperature certainly would not cause the physician to exclude appendicitis. There are some laboratory procedures which I do not believe come under this head. A positive diphtheria culture from the throat must mean the presence of the disease or a carrier state. Clinical symptoms would indicate which of these two is present. The findings of certain cells and their relation may mean malignancy but not always. The surgeon can not always make his clinical diagnosis fit in with the pathological report.

There are many misleading reports obtained from the laboratory which cannot be laid at the feet of the pathologist or technician, for failure to properly collect a specimen many times results in a failure to obtain a satisfactory report. In the routine urinalysis there is much confusion about the reporting of the presence of white corpuscles, when in fact the white corpuscles are a result of vaginal contamination and there is no infection in the urinary tract. When instructing women to bring in a specimen of urine for examination, the physician should always warn the patient to cleanse well the external genitalia. Wassermanns collected with a sterile syringe and needle and then placed into a vial which is not sterile and then delivered to the laboratory in one, two or three days, usually results in the report of "anti-complimentary," for bacteria more often cause such a result than the excess of chyle. Often we receive specimens of clotted blood in a vial, marked for blood count, Wassermann, blood chemistry and perhaps a Widal on the same specimen. If the physician would stop and think, he would know that it would be impossible to do a

blood count on a clotted specimen of blood. We have carried on many experiments with oxalated blood, as collected for blood chemistry, and find that for about 24 hours we can depend upon the blood count obtained from such a specimen, if the proper proportions for blood and oxalate have been used. Blood cultures should always be collected under sterile conditions and mixed directly with broth, yet we are called upon to do a blood culture upon a specimen that has been in a vial for two or three days, usually these specimens are contaminated and are unsatisfactory for examination. In taking the common throat swab, often we fail to get back into the throat and obtain our swab directly from the lesion. Often we are called upon to examine the head of some animal for the presence of Negri bodies, when the animal has either been shot through the head or some one has severely beaten the animal over the head with a club, causing a fracture of the skull with extravasation of blood throughout the brain, a condition which renders the finding of Negri bodies very difficult and uncertain. Here let me warn the physician about the danger of killing the animal before the Negri bodies have had sufficient time to develop. In the examination of sputum, when instructing the patient to collect a specimen of sputum for examination for tubercle bacilli, to warn them to wash the mouth well with some good antiseptic solution. This is of special value when collecting a specimen of sputum from which a vaccine is to be made, as you will quickly understand how easy it would be to have an overgrowth of bacteria present from the mouth, and not obtain a growth from the offending bacteria. Also in regard to mailing specimens of sputum, the United States Postal Laws are very plain and strict about such containers. Their requirements are that such specimens contain 10 per cent phenol and be packed in a double container. Postal clerks have told me about containers of sputum that have broken in the mail bag and saturated many letters and parcels.

In the matter of selection of a donor for transfusion, let me warn the physician that not always does the mere report that the blood is compatible insure the doctor that he will not have a reaction in that patient, for there are several factors to be considered. Personally, I believe that the citrate method is as safe as the direct and having a patient that shows a post-transfusion reaction from citrate, that the same patient would show a reaction following direct transfusion, all conditions being equal. The factor of allergy is one that should be considered for there is considerable danger from the introduction of a foreign protein during transfusion. Again, I am sure that some of the so-called reactions are due to the introduction of air, small clots, etc. I believe that the safe procedure in selection of a donor is to group the recipient and donor by Jansky classification and then to match directly. If both are suitable and technical errors eliminated, from the pathologist's standpoint, the donor is suitable and it is then the responsibility of the attending physician to consider other factors.

I have made reference above to the Wassermann test but let me consider it from another angle for a few moments. It seems to me to be an indefensible practice to let a patient wait for 6 or 8 weeks after a suspicious sore appears, in order to obtain a Wassermann on the blood. The dark-field illumination offers a speedy and accurate diagnosis as soon as the lesion appears. There is much discussion about the time of obtaining a positive Wassermann after the initial lesion appears. I am sure in some cases, we obtain a positive as early as three to four weeks, in some cases, however, it will be 6 to 8 weeks, so we would hardly put dependence in a negative report for at least 2 months. Another matter that is under continual fire is the period which is allowed to elapse between the treatment and the Wassermann time. I believe that the patient should receive no treatment for 4 to 6 weeks before placing dependence in the Wassrmann report. In untreated cases, we disregard a one plus; a two plus should have repeated tests until either a positive or negative is obtained, considering a three or four plus as diagnostic for syphilis. To date, we have not reached a degree of efficiency in the Kahn test to depend upon it, but I do

believe that it is an excellent check and should be a routine procedure. There are several drugs that may effect the Wassermann. The most important is alcohol and each time, when collecting a Wassermann, we should inquire into the use of it and, if the patient has used it within three days, we should defer the collection, for many times we obtain a negative on a case that should give us a positive Continued use of barbitol also affects the Wassermann.

The importance attached to a basal metabolic reading is in direct proportion to the ability of the operator. There are so many factors of error that enter the test that I am sure many high metabolic readings are in error. Factors of exercise, fear, food and mental condition are the important things to consider. My experience proves that we should be firm in our instructions to the patient, no food for 14 hours, no exercise for 8 hours, with assurance that the test will not be in the least unpleasant, much less dangerous or painful. I find that it does not affect the reading for the patient to arise and go slowly, without breakfast, to the office, there to lie down for at least 2 hours. If all conditions are favorable, I believe that a high basal reading is of value in the diagnosis of hyperthyroidism, and a low reading as valuable in the diagnosis of hypothyroidism a minus 15 to a plus 15 being the normal range.

In conclusion, let me insist that a better understanding between the pathologist and the physician is necessary, if we are to obtain the best results from the laboratory for the patient.

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CLINICS

Pancreatic Cysts

W. F. Bowen, M.D., and Milton B. Miller, M.D., Topeka, Kansas

A review of the literature indicates that pancreatic cysts are comparatively infrequent, that correct pre-operative diagnosis is difficult and seldom made, and that they usually follow severe abdominal trauma or chronic pancreatitis.

Their rarity is revealed by the fact that Hale White observed but four cases in nearly 6,000 autopsies performed at Guys Hospital from 1883 to 1894 and that up to 1907 only 175 cases had been recorded. We have been able to find about 100 more reported since that date.

Diabetes associated with the condition is a rare rather than an expected finding. In the first series of 134 cases reported only nine had diabetes. In Judd's report of 41 cases at the Mayo Clinic three were found to have diabetes.

Pancreatic cysts are grouped into three general classes:

1. Retention cysts, due to obstruction of ducts.

2. Proliferation cysts, due to the cystic degeneration of new growths within the pancreas.

3. Pseudocysts which arise within the substance of the pancreas as a result of degenerative changes affecting the interstitial tissue of the gland.

This latter group includes those cases of hemorrhage into the gland from trauma which result in cyst formation and comprise about twenty to thirty per cent of the cysts.

The cysts vary in size, the largest reported by Rufus B. Hall contained 23 pints. They occur at any age, but usually between twenty and forty years. One case reported by Dean Lewis was in a child sixteen months of age, the oldest, age 68, was reported by Dr. Judd of the Mayo Clinic.

The contents of the cysts vary some but they usually contain one or more of the pancreatic ferments, the presence of trypsin rendering the diagnosis certain. There is usually also some epithelial cells, cholesterin, fatty globulins, crystals, red blood cells, leukocytes and traces of mineral salts.

The cysts may develop in either the head, body or tail of the pancreas and depending on where they develop the symptoms are somewhat different, those in the head usually producing some biliary obstruction with jaundice.

There is usually a history of prolonged indigestion and abdominal discomfort with pain of colicky type, and as the cyst enlarges symptoms of pressure upon the other organs involved appear. Pain is usually more severe in the epigastric region. Weakness and loss of weight are generally accompanying symptoms

The most distinctive sign, however, of the existence of a pancreatic cyst is the progressive enlargement of the abdomen with tumor formation situated between the xyphoid cartilage and the umbilicus. The mass usually protrudes most in the left hypochondrium and presents a distinct respiratory immobility. The surface is smooth and fluctuation may or may not be present.

In the differential diagnosis the following conditions must be taken into consideration: echinococcus cysts of the liver, omental or mesenteric cysts, distended gall bladder cysts, ovarian cysts, hydro-nephrosis, and aortic aneurism.

The course of the disease is ordinarily short though progressive, and usually they come to operation sooner or later for this is the only method of relief of the condition and is always indicated. Extirpation or drainage is the usual procedure, and extirpation is rarely done because of its extreme difficulty and the danger due to the location of the cysts and the firm adhesions to everything about them.

The operation most usually performed is marsupialization, that is stitching the edges of the cyst wall to the skin edges, making a permanent fistula. In the case we wish to report this procedure was followed and we may mention that it was first advised in the treatment of this condition by Gussenbauer in 1882.

Mrs. S———— was first admitted to Christ's Hospital March 14, 1921, because of a large tumor within the abdomen. She at that time was 55 years of age and weighed 200 pounds. Father died at the age of 86 of stomach trouble, mother died at the age of 53 of paralysis, one sister died following gall stone operation and another sister died of cancer of the uterus. She had always been in very good health until 1919 when she had rheumatism in her back and could not walk for some time. In 1920 she had influenza and since 1919 had had occasional pains in left upper abdomen with nausea and vomiting and some time later felt a mass in her upper abdomen, which gradually increased in size. Examination at this time showed large tumor within the abdomen and apparently occupying the greater part of it. Exploratory operation advised as we were unable to determine much about it but thought it probably a retrocecal tumor. Her laboratory findings were negative at this time but there was a trace of sugar in her urine post-operative, then cleared up. She was operated upon some few days after admission and one gallon of whitish fluid withdrawn and drainage tube left in. Laboratory findings on the fluid at the time were uncertain as to its being pancreatic fluid though its position suggested this.

Patient was in the hospital about one month and returned home draining freely through the tube which was still in.

Subsequent course: She drained for about three months after operation and about three years later or about 1922 considerable sugar was found in her urine by her family physician. She was very fond of sweets and starchy foods but was put on rather strict diet and has been on such ever since.

In March, 1927, she reported back to us for examination and her wound was entirely healed. A small tumor mass was palpable in left upper abdomen, felt to be about size of a grape fruit. Her urine showed 2 plus sugar and she had a blood sugar of 333. She was sent home to be put on insulin and continuation of diet.

In July she returned, tumor now filling up the entire upper abdomen, painful at times, and there was some nausea and vomiting. Urine showed no sugar but some albumin and casts. Blood sugar 250.

July 11—operation done. Three gallons dark greenish fluid withdrawn through opening that was made between the stomach and colon. Skin edges were sutured to edges of cyst wall. Patient made uneventful convalescence. Urinalysis when dismissed was negative.

Hyperthropic Osteoarthropathy of Lower Extremities Associated with Arteriosclerosis

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G. S., white male, aged 62, farmer, was admitted to Christ's Hospital, October 8, 1927, for observation.

There was nothing of importance in his family history.

He had had the usual diseases of childhood and at the age of 18 had typhoid fever and was sick for six weeks. Since then has been in good health until four years ago.

The history of his present illness as obtained from him is that in the fall of 1923 he began having trouble with his feet. After being on his feet during the day he would notice some swelling at bed time and the next morning on attempting to walk he would have a great deal of pain which would wear off after walking awhile. After a few hours his feet would begin to pain again. Lameness and pain has increased from time to time. About three years ago there was an interval of four to six weeks during which there was neither pain or swelling. But the trouble returned and his feet became very much larger, and for the past two years has had difficulty in gtting shoes large enough for him. At the present time he is almost unable to walk and is seldom free from pain.

Examination: This man is 74.5 inches in height and weighs 145 pounds. His color and general appearance is fairly good. His pulse is 80, respiration 20 and his temperature 98.6 degrees. The urinalysis shows nothing abnormal. His blood count showed, hemoglobin 71 per cent, red cells 4,450,000, white cells 10,400; polynuclears 67, large lymphocytes 3, small lymphocytes 27, eosinophiles 1.

His blood pressure was 120 systolic and 70 diastolic.

Examination of the head, nose, mouth, and throat showed no abnormalities. All of his teeth have been extracted. Some two years ago he was advised to have them extracted because of what was supposed to be rheumatism in his feet.

His chest is poorly developed but no abnormal respiratory sounds are heard. His chest measurements are—inspiration 35 inches and expiration 33 inches.

The heart is normal in size and position and no murmurs are heard. The blood vessels in the forearm and arm and in the legs and groin are large, hard and tortuous.

The abdomen is flat and there is no tenderness. No tumors or enlargements can be made out. Some small hard glands can be felt in the inguinal region.

Pupils respond equally to light. The patellar tendon reflexes are normal. The feet and ankles appear to be edematous but do not pit and on palpation the bones of the feet seem very much enlarged, as also do the bones of the legs in the lower third. There is marked pigmentation of the lower half of the legs and ankles.

The roentgenologist's report is as follows: "The lower thirds of both right and left tibiae and fibulae show considerable periosteal new bone formation, otherwise nothing abnormal can be seen."

The Wassermann is negative. The patient denies ever having lues.

The diagnosis in this case is secondary hypertrophic osteoarthropathy associated with arteriosclerosis.

Cecil describes this disease as a general and symmetrical hypertrophy of the distal phalanges of the fingers and toes with resulting clubbing, frequently accompanied by enlargement of some of the other bones of the hands and feet or by hypertrophy of the bones of the forearms and lower legs.

Clubbed fingers developing in the course of chronic phthisis and empyema were described by Hippocrates. In 1889 Bamberg described an "ossifying periostitis" in the bones of the forearms and legs in two cases of bronchietasis. In 1890 Marie published a report of eight cases of this disease which he called "Osteo-arthropathic hypertrophiante pneumique." In 1915 Locke collected 144 published cases. Of these, 112 followed primary disease of the respiratory tract, 6 were associated with disease of the circulatory system, 13 were associated with diseases of the alimentary tract and 13 were associated with miscellaneous disorders.

The consensus of opinion seems to be that two factors should be considered as the cause of the disease: A toxemia of bacterial or other origin and a chronic passive congestion. It is known that a chronic venous stasis may induce proliferation of bone.

When only the terminal phalanges are involved there are no symptoms, but when the long bones are involved symp-

toms are marked. Pain is almost constant but may be intermittent, occurring only at night or after long standing. Exacerbation and remission have also been noted.

MEDICAL SCHOOL NOTES

During the Inter-State Post Graduate Medical Association meeting in Kansas City, October 17th to 21st, the following distinguished guests were entertained by members of the faculty of the Kansas University Medical School:

Dr. Leonard G. Rowntree, professor of Medicine, University of Minnesota, Rochester, Minnesota, guest of Dr. Russell L. Haden.

Dr. Guieseppe Franchini, professor of Pathology, Royal University of Bologna, Bologna, Italy, guest of Dr. Logan Clendening.

Dr. Elliott P. Joselin, professor of Clinical Medicine, Medical School of Harvard University, Boston, Massachusetts, guest of Dr. Ralph H. Major.

Dr. Alan Brown, professor of Pediatrics, University of Toronto, Toronto, Canada, guest of Dr. H. L. Dwyer.

Dr. John C. Meakins, professor of Medicine, McGill University, Montreal, Canada, guest of Dr. Logan Clendening.

Dr. Walter E. Dandy, professor of Clinical Surgery, Johns Hopkins University, Baltimore, Maryland, and Dr. J. Shelton Horsely, of Richmond, Virginia, were guests of Dr. Thomas G. Orr.

Dr. Gustav Alexander, professor of Disease of the Ear, University of Vienna, Austria, guest of Dr. J. L. Myers.

Dr. A. W. Adson, associate professor of Surgery, University of Minnesota, Mayo Foundation, Rochester, Minnesota, guest of Dr. Frank R. Teachenor.

The following medical school graduates visited the hospital this month: Dr. Benj. S. Morris '25, Morland, Kansas; Dr. Crozier S. Hart '25, Dawson, New Mexico; Dr. Chas. Brady '26, Cole Camp, Missouri; Dr. E. H. Dellinger '26, Smithton, Missouri; Dr. Andrew Olson '25, Dr. Watkins A. Broyles '24, Eaglesville, Missouri; Dr. Burleigh E. DeTar '24, Miami, Oklahoma; Dr. George R. Lee '24, Yates Center, Kansas; Dr. Or. E. Stevenson '11, Oswego, Kansas; Dr. R. C. Henderson '06, Erie, Kansas; Dr. J. R. Bechtel 1900, Lawrence, Kansas; Dr. J. L. Truex '91, Joplin, Missouri; Dr. H. C. Hume '25, Hayes Center, Kansas; Dr. F. D. Candler '02, Bonner Springs, Kansas; Dr. R. A. Taylor, '06, Topeka, Kansas.

Dr. James Weaver '23 is now located with Dr. C. B. Francisco in the Argyle Building, Kansas City, Missouri. Dr. Weaver recently completed an internship at the Hospital for Ruptured and Crippled of New York City.

Dr. H. R. Wahl recently returned from a meeting held in Montreal, Canada.

Dr. Thomas G. Orr and Dr. L. P. Engle attended the American College of Surgeons meeting at Detroit.

Fever-Producing Methods in Treatment of General Paralysis

Compilations have been made of the results obtained in cases of general paralysis treated with malaria. The treatment has also been applied to patients with syphilis of the central nervous system. A microscopic study of the brain following treatment by malaria leads to the conclusion on the part of the investigator that in some cases in the future the term "recovery" rather than "remission" will be justified. Relatively little has been reported during the past year concerning relapsing fever or sodoku as a therapeutic measure in neurosyphilis. It seems likely that, if infectious disease methods are to persist, a contest might arise between malaria and sodoku. Possibly the inoculation with an infectious disease will not continue to be necessary in the production of therapeutic fever. Reports have been published on the production of fever for treatment in general paralysis by the use of injections of foreign protein. The method has many advantages and the few cases on record give promise of good results.—Journal A. M. A., Oct. 15, 1927)

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The statement is iterated and reiterated that the nations of people who use the tooth brush have the worst teeth. If true, it is not the fault of the tooth brush but the user of the brush who keeps it septic. Experiments show that the average tooth brush is a fertile place to breed disease producing germs upon. If a surgeon did not asepticize his instruments before and after each operation his practice would soon be nil. The tooth brush, when used, not only scrubs the teeth but the bristles scratch the gums, break the mucous membrane and rubs the bugs in. It is a sure way to re-infect.

THE JOURNAL
of the
Kansas Medical Society

W. E. McVEY, M. D. - - Editor

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THE PRACTICE OF MEDICINE AND THE PUBLIC HEALTH SERVICE

There are numerous and various opinions on what the relations should be between the practitioners of medicine and public health agencies. The tendency is to underestimate the part played by practitioners in all public health service. Dr. W. F. Draper, Assistant Surgeon General, U.S.P.H., in an address at the last annual meeting of the American Medical Association, said: "The bulk of the health work is done by the practicing physician, who is held morally and often legally responsible for its proper performance."

The efficiency of a public health agency depends primarily upon knowledge of the occurrence, prevalence and nature of the diseases it is expected to control, and this information is derived from the gratuitous report of the practicing physicians in its territory. The importance of this service cannot be minimized by the fact that it is compulsory service, required by regulations promulgated from time to time by these public health agencies.

It should at any rate establish the fact that an intimate co-operative relationship does exist between them. The fact that a practitioner can, and frequently does, submerge his diagnostic judgment and jeopardize his reputation, when it is a matter of expediency, and report the existence of a contagious disease that does not eventuate, establishes the fact that he is a conscientious co-operator with the public health agencies. Every one knows this does frequently occur when epidemics are prevalent for the health authorities as well as the practitioners recognize that it is safer to quarantine cases that show slightly suspicious evidences of contagious disease, than to risk the possibility of communicating the disease to others before a definite diagnosis can be determined. It would be extremely difficult for health authorities to control an epidemic without this co-operation.

Preventive medicine had its origin in the medical profession. That it failed to accomplish much with its own initiative and its own potentiality was not because of lack of knowledge of the principles of hygiene and methods of prevention, nor to lack of interest or concern in the results; but because it could only function in an advisory capacity. It had no authority to compel the people to act upon the advice given.

It was due to the persistent and aggressive demands of the medical profession that our now great public health service had its beginning As this service grew and developed, and its scope of activities broadened, and its efficiency was more and more definitely demonstrated, it was natural that practitioners of medicine should relinquish their responsibility in matters of prevention to those agencies especially equipped for the purpose and endowed with legal authority to enforce their regulations. Their activities in the prevention of disease were not in any degree retarded by

this surrender of responsibility to the health agencies. But what had been voluntary service became compulsory service and has steadily grown in volume and importance. At this time a considerable proportion of the acute diseases a general practitioner is called upon to treat are reportable. This is a service and is seldom if ever regarded as a burden by the profession.

The only voluntary service they now have occasion or opportunity to render is incidental to some local campaign for general immunization; and one is justified in the conclusion, from the reports received, that they have not failed in their co-operation. It is well recognized by practitioners as well as health authorities that the only safe procedure in the face of a threatened epidemic or a possible epidemic is mass immunization. Apparently this can be conducted successfully only after an aggressive publicity campaign and a guaranty of charity rates, or perhaps one should say wholesale rates, for the treatments required. Otherwise the doctors will be accused of putting on a "business getter" campaign and the health authorities will be accused of promoting it.

No physician worthy of recognition as such regrets the loss of business occasioned by the prevention of an epidemic but, unless some of the discussions of this matter published in other journals have been misinterpreted, there are physicians who feel that people who are financially able should pay for their immunization. There is eminent justice in this contention, but an immunization campaign conducted on that basis, at least one put on for the first time in a community, would certainly fail. It would fail for the reasons already stated and because the people must first be shown what may be accomplished. After such demonstrations as have been made in numerous sections of this State it hardly seems possible that the people could any longer question the efficacy of immunization. Nor do many of them, but having, with a great deal of persuasion, been induced to accept something of great value for nothing—or a pittance—they are not very willing to pay full value for another article of the same kind. A good many will wait for the next "dollar day."

Of course it is quite important to inform the people that special rates will be given only on a certain day or days, but if Mr. Father brings little Percy in on the specified day and gets the immunization for a dollar and in two months he brings little Alicia in he will insist on getting the same rate and if the doctor charges him five dollars he will probably lose his business. This is not an imaginary complication, it frequently happens just that way.

Perhaps in order to relieve the practitioners of any additional burden it has been customary in some cities and some counties for the health department to immunize, free of charge, all those unable to pay It is always surprising how many people assume the guise of poverty when a few dollars may be thus saved. And when five hundred children are treated in one day there is no time to investigate the size of the parent's bank account. When a practitioner learns that some of his good pay families have been treated by the health department he doesn't object, but he recommends others to go there for immunization, and tells them they can get it there for nothing while he would have to charge them a fee. They appreciate that.

In spite of the intimate relationship which should and necessarily does exist between the medical profession, at least that part of the medical profession engaged in practice, and the public health departments, there is a dividing line that

is becoming more distinct. There is an increasing lack of harmony between them, there is a feeling on the part of the practicing body of physicians that the public health service is steadily encroaching upon their legitimate territory. There seems to be a feeling on the part of those who are identified with public health service that the practitioners of medicine are not doing all they should do in the prevention of disease. This is plainly evidenced by the following quotation from Dr. Draper's address:

"Extensive attempts have been made by health organizations to excite the interest of the citizen in the protection of his health. All the ingenious machinery of the leaflet, the poster, the illustrated lecture, the health exhibit, and the radio broadcast have been utilized. The visiting health nurse and the consultation clinic are familiar illustrations of the organized attempt to bring information to the public. But it would appear that what would seem *a priori* to be the most fruitful source of advice in matters of personal and domestic hygiene had, in general, been deplorably neglected.

" . . . It would be proper, I should think for the family physician to examine into the sanitary condition of the home itself, and to call attention to obvious health hazards intrinsic therein, as well as to become familiar with the physical and mental status and habits of the members of the family. On the other hand, questions dealt with by local sanitary law should be referred to the health authorities.

"It is my impression that the old-fashioned family physician knew far more about his families and their members as regards both their physical condition and their mental comfort than is the case nowadays. Undoubtedly, an enlightened return to this more intimate relationship would be better for the public and also, as I think, for the physician. Is there any good reason why the discovery of defects in the children of families in which a physician attends the adult members should be left to the school medical examination, if there happens to be one? Should not the family physician have detected and treated these in their incipience? And so with the adult members of families in which the children have been attended by so-called family physicians. Must their dietary disease, their hernias, their tuberculosis, their mental maladjustments go unrecognized until the patient himself or his relatives or employers or society in general complains of them?"

Perhaps one might find in this statement of Dr. Draper a possible explanation of the situation. Public health agencies are free to use methods "to excite the interest of the citizen" that for obvious reasons cannot be used by practitioners. Sometimes these methods are so out of harmony with the ideals of medical practice that they receive little co-operation or support from practitioners. Sometimes the methods are adopted without any consideration for the interests of the practitioner, and sometimes he resents what seems to him to be unnecessary interference with his private practice. Sometimes he is compelled to defend his diagnosis and opinion against a contradictory diagnosis and opinion advanced by a school nurse, public health nurse, or in a consultation clinic. It isn't just a question of who may be right. Few practitioners in these days are so firmly established with their clientele that they are immune to criticism, and the confidence of their patients is sometimes shaken by an opinion given by some one of these agencies after an inspection or a cursory examination. Certainly the medical profession is under obligation to co-operate with public health agencies in

every reasonable manner in the efforts to control and prevent disease. Certainly the important service given by the medical profession in the administration of public health regulations justifies careful consideration of the rights and privileges of practitioners when any program is prepared by public health agencies. Organized medicine can restore and maintain harmony between these two great bodies of medical men, can safeguard the interests of practitioners and give to the public health service every co-operation required. The county societies are the local units of organized medicine and they should not only take an active interest in public health matters but they should sponsor every campaign for immunization. When these campaigns have been so controlled, where consultation clinics have been held under the auspices of the county society, there apparently has been no friction. At least no complaints have been made and there are a good many societies in the State that have joined hands with the local and State health agencies in their efforts.

Since the county society represents the best medical men in the county and usually includes the county health officer—if he is a live one—there is no reason for any conflict of interests. Complete control of all these activities in every county easily lies in the hands of the members of the county society.

NOTES ON THE POST-GRADUATE ASSEMBLY AT KANSAS CITY

The Interstate Assembly of North America was a great meeting this year. There must have been extraordinary attractions to draw an audience of five thousand doctors, from all over the continent, and indeed from many countries of the Old World. One asks what was this attraction. The answer is, the great number of men of international reputation on the program. No matter how ordinary or infra-ordinary their powers of delivery might be, these great men were there on exhibition, to be seen in the flesh by their auditors. Their books and other writings are always available, and the things that have made them famous can be read about at leisure and digested, but that is not the same as seeing the men themselves.

I looked over the great audience with a peculiar thrill. "Here," said a neighbor, "is a cross section of the medical profession of America." "No," said I, "it is a longitudinal section, taking in the brains, as well as the intestines and all the humble, inconspicuous viscera of the medical body." Individuals from the greatest to the least were gathered here in one vast assemblage.

The Shrine Temple, in which the meetings were held, was well adapted to the purpose. It is a beautiful edifice, well appointed throughout, and served the purposes of the meetings splendidly. The acoustics were good, but the microphone, and sound amplification by modern methods made certain that every word should reach every ear. There was abundant room for the exhibits, which were very numerous, both commercial and scientific. One could buy any kind of lamp, I think, that modern ingenuity could possibly devise. I do not think the lamp of Aladdin of old had anything on the lamps offered by these exhibitors, if we can believe the miracles the latter ascribe to their wares.

There was a good deal on the program under the head of "clinics." These clinics were more or less of a disappointment, as are most such so-called clinics. To bring a patient out and set him before an

audience, read his case history and chart and then talk about him is not a clinic, not even though they bring him out on a bed. There, indeed, is the man or the woman or the child who is said to harbor the alleged disease, but that is as far as the spectator gets. He does not get to verify anything for himself. The patient is merely the peg on which to hang a bunch of talk. He is simply used to focus the attention of the audience while the speaker, like a conjurer, pulls off his tricks of discourse. Yet this is a common method of procedure these days, in medical programs, and we are supposed to feed on it and like it.

The distinguished foreign participants were as a rule disappointing. Their English was, for the most part, so broken that they could scarcely be understood. This, of course, does not apply to the British doctors, who were splendid examples of that suavity of manner and clearness of diction so generally characteristic of our English medical cousins. All these men from abroad were genial and likable, and showed a most ardent desire to please their audience and to gratify its expectations.

It was a very methodical and business-like meeting. The program started promptly at 7 a. m. and went right along, with only brief intermissions, till 10 o'clock at night. It was very intensive and exacting, but one felt that it was thoroughly worth while.

The great medical men in evidence there were found to be very human and very affable. Perhaps we got a closer contact with them there than could be had anywhere else, unless we actually lived with them. They seemed to place themselves on a level with their fellows sitting out in front, and talked to them as their peers. There was nothing of condescension in their attitude, as sometimes happens in other bodies. They were there to be handled and felt, so to speak, and they stripped themselves of their robes of dignity for the purpose.

It is not fair to compare this meeting with that of the A.M.A. The Assembly is devoted to the authoritative presentation of new methods and recent advances in medicine in didactic form by teachers, or men known to be competent to teach. And here the presentation is made to the whole Assembly, and no discussion follows. The A.M.A. on the contrary, is less discriminating in the making of its program, and the papers are to be taken for what they are worth. And these papers are exposed to discussion which may be illuminating or inane. There is nothing more futile than the average discussion following the reading of a medical essay. Again, the A. M. A. meeting is broken up into sections, and the whole body is never together in one audience. Finally, there is the odor of politics more or less present in all meetings of the A.M.A. It is not only a scientific organization but also an economic or social one, with wheels and wheels and wheels.

Every day of the meeting was a good one, with stars on the program, but perhaps the last day had the most lavish display of celebrities. Imagine a crowded day with the following star performers: Judd, Crile, Charles Mayo, Barker, Deaver, Erdmann, Riesman, Kalteyer, et al.

There was an infiniate amount of hard work that had to be done by the local Kansas City doctors to get ready for and take care of such a great meeting. This work was evidently done well. A spirit of hospitality and good fellowship was

in the air, and every courtesy was extended to the visitors. The Kansas City profession are noted for the team-work they display when going after or handling a medical convention. They came near getting the A.M.A. meeting for next year, and next time they probably will land it. O. P. D.

CHIPS

The following, extracted from a letter by Thomas Hordes to the Lancet, seems especially pertinent. "The spread of irresponsible statements about the causes of cancer, such as the fiction that this disease is due to the eating of some special article of diet, tends to distract the public mind from the only way by which this great problem can ever be solved—namely, by painstaking and concentrated research."

Carbuncle of the kidney is a rare disease but occurs sometimes and should be kept in mind as a possibility. Thompson describes it in the London Lancet, October 1, as a hematogenous infection of the interstitial tissue of the kidney producing a localized and circumscribed zone of multiple suppurating foci, leaving the remaining renal substance unaffected. There is always a primary focus, as a rule a furuncle on the skin. There is usually intermittent fever, pain in the loins or upper part of the chest behind aggravated by pressure. Swelling and sometimes bulging in the affected side may sometimes be made out.

The frequently expressed opinion that migraine is inherited from neuropathic ancestors is challenged by Allan in the October number of Archives of Neurology and Psychiatry He concludes that psychosis, psychoneurosis and epilepsy occur with the same frequency in migrainous as in non-migrainous persons. Migraine has not been observed to come from anything but migraine in the parents, nor to pass down to the children in any other form. He states that more than 90 per cent of his migrainous patients gave a history of migraine in one or both parents; and that when one parent was migrainous half the children were migrainous. Where both parents were migrainous more than three-fourths of the children were migrainous. His opinion is that migraine is independent of the neuropathies and its inheritance as free of neuropathic taint as the inheritance of the color of the eyes.

Recent cholecystographic studies of the gall bladder have added considerable to the knowledge of its functions. It has been shown that the gall bladder is emptied by active contraction, not by a flow of bile from the liver and that it concentrates bile more readily when partially collapsed. It has also been shown that the administration of bile salts increases the flow of bile from the liver but does not cause emptying of the gall bladder, but that fat does stimulate contraction and emptying and that the emptying may be so complete as to cause collapse of the organ.

Recently there has been a considerable amount of talk about calcium therapy in many of the common disorders in which a calcium deficiency was suspected though not demonstrable clinically. In the September number of the Medical Clinics of North America, Sexton reports the results of investigations of 290 consecutive cases. In his conclusions he says: "With our present methods of blood calcium estimation, no obscure calcium deficiency was found to exist in the various systemic disease in a percentage of cases sufficiently high to consider it a positive etiologic factor. . . . As far as these investigations show, there is no indication for calcium therapy in tuberculosis, asthma, chronic arthritides hypersensitiveness, epilepsy, cardiovascular-renal disease, or infections. Calcium unquestionably should be administered in tetany, rickets, and certain diseases of the bone."

In a report on the cases of carcinomatous metastasis to bone in the Brooklyn Hospital, Surgical Clinics of North America, August, Ruth Ingraham says: "A more careful study of our cases of breast cancer would demonstrate the early involvement of bone in a considerable percentage of patients who show no lung, pleura, or intraperitoneal metastasis, and who otherwise may seem with-

in the limits of operability. By such a study, it should be possible to eliminate a certain percentage of useless and unwarranted operations."

In the preface to his recent book on epidemic encephalitis Crafts says: "In recent years medical literature has been growing rapidly overburdened with increasingly involved abstruse nomenclature that is largely without warrant or excuse, until it has now reached the point where even the most scholarly must have a lexicon, and that the latest, at his elbow when reading an article or book, or he soon is lost in a maze or unheard of terms. Our so-called internists have been the worst offenders in this, and more recently the psychoanalysts, especially in coining new names for age old things, perhaps more high sounding but contributing nothing to the art or science of medicine."

Dr. J. H. Kellogg, of Battle Creek, has undertaken to educate the public in matters of health and edits a monthly magazine for that purpose. In a recent number there appears an article from his pen on alcohol, in which he says: "Alcohol is sewage. It is the excrement of the yeast plant." "I do not think an instance could be found in all natnre in which the excrement of an inferior creature is food for a higher creature. Man takes this excrementitious substance and actually makes a beverage of it." "Not only ignorant people but even cultivated people, even some doctors at the present time, are still laboring under the delusion that alcohol is a good thing, a medicine! Science has shown this belief to be false." One might be misled by that last statement into believing that he really had some respect for the teachings of science.

About thirty years ago it was considered good practice to give olive oil in gall bladder cases. It was even believed that by this means gall stones were expelled. When, however, these supposed gall stones were examined and found to be soap, the treatment was generally abandoned, though many of the patients so treated insisted that they were much improved. Recent investigations have shown that olive oil emulsions, as well as other vegetable oils, do stimulate the emptying of the gall bladder.

Since the introduction of bismuth in the treatment of syphilis numerous cases of toxic effects have been reported. The more common manifestations are in the form of stomatitis or gingivitis. Several fatalities have now been reported. Mora in reporting a case of severe stomatitis from the use of bismuth in the Archives of Dermatology and Syphilis for October, says that toxic phenomena induced by this drug may be evidenced by a gum line, gingivitis, stomatitis of varying severity, gastro-intestinal and renal changes and involvement of the central nervous system. In some instances, the administration of comparatively small doses of bismuth may result in death.

A bacteriologic and clinical study of 2000 cases of lobar pneumonia was made by Cecil, Baldwin and Larsen and their findings were reported in the Archives of Internal Medicine for September. Pneumoccus was found in 95.65 per cent of the cases, type I, 33.6 per cent; type II, 19.2 per cent; type III, 13.4 per cent; type IV, 33.1 per cent. The incidence of mixed infections varied from year to year. Pneumococcus associated with influenza bacillus was commonest and was highest during the years when influenza was prevalent. Young people are prone to type I infections and elderly people to type III infections. No striking differences in the clinical course could be demonstrated as characteristic of the types of pneumococci. The average duration of the disease was from 8.6 to 9.1 days, type III running the longest course. In 49.6 per cent of the cases that recovered termination was by crisis. Bacteremia occurred most frequently in type II infections. In 89 patients of all types whose blood cultures were positive the death rate was 83.1 per cent. Fever is present in practically 100 per cent of the cases and cough is present in 90 per cent of all cases. Rusty sputum was mentioned in 55 to 60 per cent of the first three groups and in 40 per cent of group IV. Pain in the side occurred in 80 per cent of cases in the three fixed groups and 60 per cent in type IV cases. A chill occurred in 70 per cent of cases of type I and 55 per cent of cases of type IV.

SOCIETIES

STAFFORD COUNTY SOCIETY

Society met at 8 p. m., Wednesday, October 12th. This was another public meeting and was held in the Christian Church.

More than fifty people were present. Among the number were Drs. Dillon and Stout, Larned; Adkins, Pratt; Ireland, Coats; Mock, Stivison, Scott, St. John; Dentists Weil and Burnett, St. John.

In the absence of the President, Dr. Hart, Dr. Mock presided. Two addresses were delivered and two musical numbers given, a well balanced as well as instructive and interesting program.

At its conclusion most of the doctors present participated in the discussion and many interesting points were amplified.

As will be evident in the program given below the addresses were on subjects that should appeal to every good citizen and produced a profound impression on all present. Other county societies will do well to have these conscientious and enthusiastic speakers. The program was as follows:

1. "Needed Changes in Our Health Laws"— Dr. J. A. Dillon, Larned, President Kansas Medical Society.
2. "State Hospitals from the Superintendent's Standpoint."—Dr. William Stont, Larned, Superintendent State Hospital.
3. Cornet Solo — Prof. Trillingham, Superintendent St. John High School.
4. Faculty Quartet — Mrs. Trillingham, Director, St. John High School.

All of us want to be happy,
Most of us struggle for wealth,
If we were wise,
We'd all realize,
Both are handmaidens of HEALTH.

J. T. Scott, Sec'y.

FRANKLIN COUNTY SOCIETY

The Franklin County Medical Society had its regular October meeting at the State Hospital in Osawatomie, October 26, 1927. Vice President Dr. W. L. Speer and Dr. F. A. Carmichael were responsible for the program. The members present first visited the auditorium where a picture show was in progress and enjoyed the entertainment that was being rendered for the wards of the state.

Later the auditorium was vacated and the meeting was called to order by the president, Dr. George W. Davis, who introduced Dr. Carmichael who had the program in charge.

Dr. William Dietz of the State Hospital presented a case of pernicious anemia treated by the new diet plan in which liver, kidney, spinach, lettuce, etc., is largely used with a corresponding cut in carbohydrates and fats. The case showed remarkable improvement in the red cell count.

Dr. R. C. Jaenike, also of the State Hospital, presented an interesting case of brain cyst and the audience gave marked attention as the doctor developed the points in diagnosis.

Dr. G. W. Forman of the hospital staff then presented slides of microscopic sections of nerve tissue showing the development of spirochetes about the vascular layer beneath the cortex.

Dr. L. F. Barney of Kansas City then gave us a talk, the result of six hundred surgical cases in which spinal anesthesia was used. Dr. Barney said an anesthetic to be ideal should first, have no mortality; second, no post operative complications; third, no discomfort or pain; fourth, complete relaxation, and that for operations below the naval the spinal method more nearly fulfilled these conditions than other methods. That it was safe in experienced hands but that carelessness in use was fraught with dangers. Out of his series he had one death, but on the whole the patients got along better with less after troubles than by ether anesthesia. In a few cases where the operation was prolonged small amounts of ether were required. A general discussion followed at the close of the presentation of cases and the lecture on spinal anesthesia.

Those present, members and visitors were as follows: Drs. F. A. Carmichael, W. L. Speer, R. C. Jaenike, G. W. Forman, of Osawatomie; Drs. J. B. Davis, H. J. Terrill, H. W. Gilley, G. W. Davis, W. C. Hayhurst, P. R. Young, J. A. Dyer, V. E. Lawrence, J. R. Scott, of Ottawa; S. D. E. Woods of Princeton, and O. N. Clark of Lane.

Visiting physicians: Drs. Josephine Davis, and Ida M. Scott of Ottawa; O. C.

Lowe, P. A. Pettit, Clifford Van Pelt, L. A. Van Pelt of Paola; Dr. J. W. Kelley of Louisburg; Drs. E. W. Pace, A. W. Fairchild and J. G. Poole of Osawatomie.

The meeting of November will be a public meeting conducted by the State Board of Health. The subject for discussion will be tuberculosis.

Drs. F. A. Trump, W. L. Jacobus and H. J. Terrill are taking the course in pediatrics driving to Lawrence every Wednesday morning. It is an extension course given by the University.

J. R. Scott, Sec'y.

DEATHS

Louis E. Vermillion, Lyons, aged 77, died August 14, 1927. He graduated from the Keokuk Medical College in 1891. He was a member of the Kansas Medical Society and was at one time president of Rice County Society.

Thomas Clarkson Benson, Kansas City, Kansas, aged 71, died September 10, of cirrhosis of the liver and broncho pneumonia. He graduated from the University Medical College, Kansas City, Mo., in 1891.

Jesse T. Bruton, Columbus, aged 95, died August 12. He was a Civil war veteran. He was licensed to practice in Missouri in 1865.

Edwin Taylor Shelly, Atchison, aged 68, died October 13, from injuries received in a motor car accident. He graduated from the University of Pennsylvania School of Medicine, Philadelphia, in 1881. He was a member of the Kansas Medical Society. He had practiced medicine in Atchison since 1884.

R

Adopted

MARY HAUFLE CARPENTER
Chanute, Kansas

Ambition's high ideal has its reward!
We needed him to shape our earthly dreams,
This tiny orphan baby boy. . . . It seems
A service great and love in one accord.
With pride and joy we watch his happy play;
His childish helplessness controls our feet;
His pleading eyes, and wistful smile so sweet,
And new found words expressed each passing day,
With radiant face as tender as a girl's.
From two weeks old to three years now, or more,
We've loved our baby boy with yellow curls,
And thus have realized the gift in store
That money cannot buy, nor ocean pearls,
Nor other gems that into coffers pour.

BOOKS

The Surgical Clinics of North America (Issued serially, one number every other month.) Volume 7, Number 4 (Brooklyn Hospital Number—August 1927.) 311 pages with 168 illustrations. Per clinic year (February 1927 to December 1927.) Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

This is the Brooklyn Hospital Number and in a foreword the director of the surgical department says that the material contained in this volume represents fairly well the routine character of certain types of surgery observed and cared for in that hospital and is, for the most part, collected from cases or studies of groups of cases presented by various members of the staff at the weekly conferences of the department. Naturally there are a large number of contributors and a considerable variety of subjects discussed. It seems inadvisable to attempt to select from these a few for special mention. Every contribution has some special merit that will appeal to the reader.

The Anatomy of the Nervous System—from the standpoint of development and function. By Stephen W. Ranson, M.D., Ph.D., Professor of Neuroanatomy, Washington University, Medical School, St. Louis, Mo. Third Edition, Revised. Octavo volume of 425 pages with 284 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $6.50 net.

This work has just been revised and the author has endeavored to add data concerning important advances in neurology without increasing the mass of material. Some new topics are presented among which are geniculocalcarine fasciculus, microglia, and oligodedroglia Some of the illustrations have been redrawn and obsolete matter has been omitted.

Diagnosis and Treatment of Diseases of the Stomach, with an introduction to Practical Gastro-Enterology. By Martin E. Rehfuss, M.D., Assistant Professor of Medicine at Jefferson Medical College. Octavo volume of 1236 pages with 519 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $12.00.

This work of Rehfuss is one of the outstanding accomplishments of the year. He presents in careful detail the proper technique for all of the procedures used in the diagnosis of diseases of the stomach, and suggests the lines of treatment to be followed for the conditions found. If this work will enable the practitioner to better interpret the symptoms he finds it will have done something worth while, but it does seem that with the instructions

given in this book one ought to be able to determine with a fair degree of certainty what the actual conditions in the stomach are.

Affections of the Stomach. By Burrill B. Crohn, M.D., Associate Attending Physician, to the Mt. Sinai Hospital, New York City. Octavo of 902 pages with 361 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $10.00 net.

In spite of all that has been written about the stomach there seems still to be something to learn. The author of this book says: "All the new data on gastric secretion and secretory disturbances; the rather radical development of scepticism regarding the importance of secretory gastric changes in regard to functional conditions; the rapid strides of roentgenology and cholecystography; the broadening interest in the physiology of the gall-bladder and biliary duct diseases; and the ever changing views and viewpoints, physiological and technical, regarding gastric surgery—all these are subjecting the field of gastro-enterology to constant changes and to progressive activity."

This is an elaborate treatise on the subject, in which the author has presented the accepted views from the current viewpoints.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume XI, Number II, (St. Louis Number, September 1927.) Octavo of 322 pages with 48 illustrations. Per Clinic year, July 1927 to May 1928. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1927.

This is the St. Louis Number of the Clinics. There are twenty-eight contributors and thirty-seven subjects are discussed. The first article is by Smith and Liggett in which they report some studies in essential arterial hypertension. Zahorsky presents some very interesting infantile cases. Taussig presents cases of renal glycosuria with ketonuria. Schwab discusses psychiatric symptoms in diseases. Engelbach has a paper on infantile defectiveness. Soper discusses the treatment of peptic ulcer. Veeder's paper is on the manifestations of upper respiratory infections. Barnes' subject is epileptic mental disorders. Barr presents the diagnosis of multiple liver abscesses. And there are many others of equal interest and importance

International Clinics, a quarterly of illustrated clinical lectures and especially prepared original articles, edited by Henry W. Cattell, M.D., with the collaboration of numerous others. Volume III, Thirty-seventh series, 1927. Published by J. B. Lippincott Co., Philadelphia.

Among the interesting articles to be found in this volume may be mentioned; the electrocardiographic study of the varieties of heart block by John Miller Wilson, the clinical aspects of thrombo-angiitis obliterans by Wm. A. Steel, the differential diagnosis and treatment of gall-bladder disease by Held and Gray, the medical treatment of peptic ulcer by Phillips, the virus of herpes simplex by Simon, Meckel's diverticulum by Barney of Kansas City, and anemic spinal diseases by Nonne of Hamberg. Masland has an article in this volume on deformity correcting splints for fractures of the long bones, and Longaker discusses Kieland forceps and vesico-vaginal fistula.

Gonococcal Infection in the male by Abr. L. Wolbarst, M.D., Urologist and director of Urologic clinics Beth Israel Hospital, etc. Published by C. V. Mosby Co., St. Louis. Price $5.50.

The author has presented all the advances in the management of cases of gonorrhoea and the approved treatment of the chronic conditions occasioned by gonorrhoea. He has endeavored to present the subject "in such a manner as to offer the general practitioner, usually the first to be consulted by the gonorrheic, a working familiarity with the present day methods of diagnosis and treatment" based largely upon his own experience. There are numerous very excellent illustrations.

Getting Well and Staying Well, by John Potts, M.D., Fort Worth, Texas. Published by C. V. Mosby Co., St. Louis. Price $2.00.

This little book was written particularly for tuberculous patients and public health nurses. The author presents many of the problems that arise in the care of these patients and how they may best be solved. His argument is pleasing and will no doubt be convincing to the afflicted laymen

Emergencies of a General Practice by the late Nathan Clark Morse, M.D., revised and rewritten by Amos Watson Colcord, M.D., Surgeon Carnegie Steel Company, etc. Second edition published by C. V. Mosby Co., St. Louis. Price $10.00.

It was the object of Dr. Morse when he prepared the first edition of this book to

consider the common unheralded, every day accidents or emergencies that may and do arise to confront the general practitioner at a time when least expected. In revising the work the author has endeavored to keep to this purpose. The reader is told how to do much of the work now usually referred to the specialist, but greater stress is put upon the management of accident cases and real emergencies. The directions are given in concise and simple terms and the procedures are made more definite by well prepared illustrations.

Epidemic Encephalitis, by Leo M. Crafts, M.D., formerly dean and professor of nervous and mental diseases, Medical Department of Hamline University, Minneapolis, Minn. Published by Richard G. Badger, Boston.

The author has attempted to present all that has been established as accepted knowledge on the character and behavior of epidemic encephalitis. This seems a difficult matter on account of the variability of its manifestations, but he has met this to a great extent by the description of a large number of cases illustrating the different group types and the different courses.

Minor Surgery by Arthur E. Hertzler, M.D., chief surgeon Halstead Hospital, and Victor E. Chesky, M.D., chief resident surgeon, Halstead Hospital. Published by C. V. Mosby Company, St. Louis. Price $10.00.

Dr. Hertzler is well known to the readers of the Journal and it is unnecessary to say anything in regard to the extensive experience upon which he has drawn in preparing this book. He is thoroughly qualified to prepare a text book of this kind. He has made his ideas clear, has given the details of the recommended procedures concisely and the illustrations are instructive.

Clinical Case-Taking by George R. Herrmann, M.D., Ph.D., assistant professor of medicine Tulane University. Published by C. V. Mosby Company, St. Louis. Price $1.50.

The importance of complete case records is now universally recognized but unfortunately there are a considerable number of us that don't know how to make them. This little book is very concise and very complete in its instructions along this line. It deserves more than passing consideration it can be carefully studied with profit by all of us.

Ottawans in Rhyme, by J. R. Scott, M.D., Ottawa, Kansas.

This little collection of original poems was not sent us for review. It is well worthy of notice, however. Some men seek diversion from the monotony of business or profession in golf, some with the same object in view raise flowers, others who have a mechanical turn find diversion in creative efforts, but Dr. Scott has a different slant and when time permits, writes little verses.

He seems to have a facile pen and puts in verses now and then the things he knows of other men—the things that are or might have been. He tells about the boys at home—some that are old, some that are young, of days now gone, of days to come—in honeyed phrase, a subtle tongue. Sometimes he writes another way and puts in verse what others say, makes some men laugh and others pray, or another man's hair turn gray. But all in all he makes men see, with fulsome praise and wholesome cheer, the world's a better place to be. When all men smile then none need fear.

———℞———

The Antitoxin in the Serum

We speak of antitoxic serums, or antiserums, as the equivalent of antitoxin; but the serum simply contains the antitoxin, and along with it certain other ingredients that it has been the object of biologic research for the past thirty years to get rid of These are, so far as known, albumins and euglobulins. The former have been separated, to a large extent, from the antiserums, but the antitoxic principle is very closely linked with a globulin or a pseudoglobulin so that separation of these has been found extremely difficult.

The albumins and euglobulins are believed to be responsible for the serum sickness and serum sensitiveness that sometimes follow the use of antiserums.

An absolutely pure antitoxin has yet to be developed, but the analytic work of the pioneers in biologic therapy has at last succeeded in simplifying the problem to a certain extent. The Diphtheria Antitoxin now being offered by Parke, Davis & Co. is the most concentrated and the freest from all objectionable features of any heretofore supplied by this house.

It is almost water-white in its purity, and contains a minimum, perhaps the irreducible minimum, of albumins and euglobulins.

℞

Sana-Lok Syringes

So far it has been imperative while sterilizing a syringe of the Record type to remove the metal plunger from the glass barrel, because, owing to the different ratio of expansion and contraction of the glass barrel and the soft metal plunger, the glass barrel breaks.

To overcome this objection, the Sana-Lok and the Sana-Lok Control Syringes have been constructed.

The barrels of these syringes are made of special hard resistance glass and the plungers are of non-corrosive steel. Non-corrosive steel and the special hard glass have the same co-efficient of expansion and contraction and it is, therefore, possible to sterilize the Sana-Lok and Sana-Lok Control Syringes without removing the plunger.

Both type syringes have the Luer-Lok arrangement which, by one-half turn, securely locks the needle to the syringe, yet the same can be quickly released by one-half turn to the left. No special needles are required—every Yale Luer needle fits and locks on the Luer-Lok.

The Sana-Lok Syringe has thumb rest and finger bars—the Sana-Lok Control Syringe thumb ring and finger rings. Capacity of syringes—either 3 c.c., 5 c.c. or 10 c.c. Made by Becton, Dickinson & Co., Rutherford, N. J.

℞

Diagnosis of Tuberculosis in Child's Chest

It is the belief of Kennon Dunham, Cincinnati (J.A.M.A., Oct. 22, 1927), that when there is a history of exposure, rapid pulse, low grade fever, underweight and poor nourishment in a child, there is every reason to act without waiting for further evidence on which to base a definite diagnosis of tuberculosis. Such a child at any age under 12 is "potentially tuberculous" and should be so treated; i.e., with complete bed rest, correct nourishment, open air, all infection removed and all deformities corrected. This treatment should be continued until the child has no fever and the weight is above average. Dunham recommends that such children should be treated, whether they have a history of exposure or not, because many of them are infected from unknown sources. One should not wait until the existence of pulmonary tuberculosis can be proved; then it is too late. Physicians and nurses should make the statement that the child is "potentially tuberculous" and treat that child accordingly.

℞

Tuberculosis in Childhood

Thirty-one tuberculin-positive patients suffering from a variety of acute and chronic diseases, fourteen of which involved the respiratory tract, were found by John C. Gittings, Frederick W. Lathrop and Samuel A. Anderson, Philadelphia (J.A.M.A., Oct. 22, 1927), to be well and, for the most part, in good nutritive condition at periods varying from nine months to fifteen years after their discharge from the hospital. These results do not prove anything, but they strengthen the belief that a positive tuberculin test need not necessarily be interpreted pessimistically even when it occurs in infants under 2 years of age. The prognosis in active pulmonary tuberculosis in childhood is bad in inverse proportion to the increasing age of the patient. Involvement of bronchial nodes with only a few small discrete pulmonary foci—the primary lesions—gives a relatively favorable prognosis under proper conditions. Involvement of the pleura without recognizable involvement of the lung gives an expectancy for cure which also is relatively good. Children over 3 years of age who are tuberculin-positive without any clinical evidence of tuberculous disease should show a large percentage of arrests, if they can be protected against reinfection and be properly supervised. Even tuberculin positive infants have a reasonably fair chance of escape under like conditions. To prevent massive or repeated infection, the child and especially the infant must be separated from any active focus in the home. To prevent infection from becoming clinical disease, the principles involved in nonspecific constitutional treatment are still of basic importance. It is possible that benefit from specific biologic fac-

tors which increase resistance may be in the process of fulfilment. In the treatment of active tuberculous disease of the lungs, nodes and pleura, rest, fresh air, appropriate food and occasional laxatives comprise the chief factors. The use of ultraviolet radiations and exposure to direct sunlight are useful adjuncts but they cannot be applied indiscriminately.

Diagnosis and Treatment of Bronchiectasis

Carl A. Hedblom, Chicago (J.A.M.A., Oct. 22, 1927), summarizes his views on this subject as follows: The diagnosis of bronchiectasis based on the ordinary clinical observations has often been doubtful as to distribution and always incomplete as to the type and extent of involvement. Bronchography by means of contrast mediums visualizes the presence, distribution and type of bronchial dilation. The principles of surgical treatment of bronchiectasis are drainage, compression and extirpation. Drainage is the treatment of choice in single cavitations and for localized gangrenous extension. The methods of pulmonary compression are artificial pneumothorax, phrenico-exeresis, extrapleural thoracoplasty and pneumolysis. Artificial pneumothorax or temporary paralysis of the phrenic nerve or both are indicated as tentative procedures in early mild cases. Phrenico-exeresis and graded extrapleural thoracoplasty is the treatment of choice in the cases of long standing. The usual result is marked improvement approaching a symptomatic cure. In thoracoplasty, it makes secondary drainage and extirpation safer. The operative mortality in graded thoracoplasty is relatively low. Primary lobectomy and graded cautery extirpations are not to be recommended on account of the high postoperative mortality and the frequency of residual bronchial fistula. Secondary lobectomy or graded cautery extirpation, when indicated, following thoracoplasty and phrenico-exeresis, should prove relatively safe and highly effective. Early accurate diagnosis made possible by contrast medium roentgenography with iodized oil and prompt surgical treatment should result in a maximum proportion of cures with a minimum of risk and of sacrifice of structure and function.

Relation of Cardiovascular Disease to Hemiplegia

There are three causes developing hemiplegia in the course of cardiovascular disease; embolism, thrombosis and rupture of a blood vessel. The relation of cardiovascular disease to hemiplegia in those nine cases out of ten that are not due to primary disease in the brain is that of cause and effect, and after the accident has occurred the treatment still remains at least a 50 per cent cardiovascular problem. In those examples of hemiplegia, either transient or chronic, that come under the care of the cardiologist, little has been gained by emphasis of the neurologic problem, while much improvement has often resulted from the fundamental treatment of the arteriosclerosis and cardiosclerosis that usually go with it. In the experience of Louis Faugeres Bishop, New York (J.A.M.A., Sept. 17, 1927), those patients with hemiplegia have done best in the way of restoration if they promptly attained and continuously maintained a compensatory high blood pressure, while those who remained of the asthenic type with low blood pressure and a general softness of all the tissue were the ones who degenerated much more rapidly. While one can never escape from the fear of sudden accidents in cardiovascular disease, nevertheless the more experience one has, the more one dreads the certain death that follows, the gradual deterioration of bedridden, overfed and overdrugged patients. In coronary disease of the heart, it is Bishop's policy with regard to this accident in patients who have had a definite apoplexy of the heart, as it might be called, involving excruciating pain of hours' duration, functional failure of the heart and everything that pertains to the classic picture of coronary disease, to instruct them, after a reasonable amount of rest, that exercise must be begun. He starts these patients on graduated exercises, teaches them the use of glyceryl trinitrate symptomatically to relieve pain, and tries to build up in every way their physical strength and improve their general physiologic condition. Under this

plan he has seen many restored to a useful, though, of course, restricted life, who, under the old idea that rest treatment must continue until the tendency to pain disappears, would have drifted into a life of chronic invalidism.

—R—

Parathyroid Preservation

Wallace I. Terry and H. H. Searls, San Francisco (J.A.M.A., Sept. 17, 1927), point out that in the standard operation of partial thyroidectomy, a surprisingly large number of parathyroid glands are being removed as a result of their frequent relationship to the anterior and lateral capsule of the thyroid gland. Their removal or injury is very frequently followed by moderate transient evidence of parathyroid deficiency. By careful inspection, these bodies may often be identified and preserved. Routine preservation of the lateral capsule is an additional safeguard which should be adopted as a simple modification of present technic. Even though the symptoms of this deficiency are transient and followed practically always by complete recovery, it will be conceded that parathyroid tissue is of extreme value to the patient and should not be removed or injured.

RELAXATIVES

"Let nature and let Art do what they please,
When all is done, Life's an Incurable disease."
—(Cowley)

✣ ✣ ✣

A New One is—"innerclean." It is an intestinal laxative which cleanses the inside of a patient. It is a hydrolite bloodwash bath; washes disease away and rejuvenates the body. It is recommended especially for the aged. It promises to do away with gland transplantation.

✣ ✣ ✣

"A Rattlesnake Bites a Man and Dies," is a headline in the Los Angeles Times. Moral—rattlers should not bite a man.

✣ ✣ ✣

The "Integraph" is a recently discovered device, or invention, by Prof. Bush of electric power transmission in the Massachusetts Institute of Technology. It does problems automatically. It promises to take the place of mind in the human and a way out for the moron.

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APPLICATION FOR MEMBERSHIP

To the Officers and Members of the

.....**County Medical Society**

GENTLEMEN:—I hereby make application for membership in your Society, and, if accepted as a member, I agree to support its Constitution and By-laws, to practice in accordance with the established usages of the profession, and will in no way profess adherence or give my support to any exclusive dogma or school.

1. I was born at.....on the.....day of.....1.....

2. My preliminary education was obtained at.....
(Public schools, high school or college)
.....located at.....from which I
(City and State)
graduated in the year 1.....and received the degree of.....

3. My medical education was obtained at.....
(Name of Medical College)
.....located at.....
from which I graduated in the year 1.....

4. My state certificate was issued.....
(Name of State and date of license under which you are practicing)

5. I have practiced in my present location.....years; and at the following places for the years named.....
(Name each location and give dates)
.....
.....
.....

6. I hold the following positions:.....
(Give college and hospital positions, insurance companies for which you are the examiner, etc.)
.....
.....
.....

7. Specialty.....

8. Residence.....Street

9. Office.....Street

10. Office Hours.....

Respectfully, Name.....

P. O.....

County.....

State .....

NOTE.—The above information is primarily for use in the Card Index System of the County and State and for the American Medical Directory.

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The Early Diagnosis of Clinical Pulmonary Tuberculosis With Special Reference to Symptoms

L. J. Moorman, M.D., Oklahoma City, Okla.

Read at Sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3-5, 1927.

I am sure you will agree that I have been assigned a most difficult task. It is not easy to penetrate the veil of mystery which accompanies the invasion of the human organism by the tubercle bacillus and which may successfully attend its subtle operations throughout a life time or until the veil is torn asunder by some manifest pathological force such as softening with cough and expectoration, pleurisy with effusion or pulmonary hemorrhage. Such declarations from the house top are easily understood, even by many of the lay people. The physician must remember that grave pathological conditions of tuberculous origin may masquerade in nondescrit symptomatic garb requiring the most discriminating methods of examination.

Few physicians can justly lay claim to what has been termed diagnostic instinct, but all are endowed with special senses which, if properly trained, may become powerful instruments of precision, incredibly keen and penetrating in their search for diagnostic evidence. To go on the trail of disease with such weapons, under the guidance of reason, is like playing a most interesting game. Under such conditions diagnostic observations lose the dull note of duty and become an exquisite delight.

For the benefit of those who may argue insufficient knowledge or lack of special training I would say that the only necessary prerequisites are a reasonable amount of gray matter with special senses intact, and a willingness to practice the fundamental methods of examination. For those who may cherish the thought that they are excused because of their remoteness from medical schools, laboratories and libraries, from the great throng of creditable workers who have carried these handicaps, I cite two striking examples: Robert Koch and Edward Livingston Trudeau, who, while working in obscurity, far removed from the stimulating environment of medical centers, were able, through the faithful application of the means at their command, to make accurate observations and significant discoveries, thus laying the foundation upon which all the modern principles of the prevention and cure of tuberculosis are so firmly established. In the light of these facts we should be ashamed to magnify our limitations and minimize our opportunities.

Before going on with my discussion I desire to make a broad denial of the charge of ignorance, on the part of the family physician, concerning the diagnosis of tuberculosis. The average physician possesses much more skill and knowledge concerning the diagnosis of this disease than he is credited with. His failure is due to lack of application rather than a want of knowledge. He fails to make practical use of the diagnostic means at his command. This failure is usually due to indifference which, in each case, has grown out of one or more factors that contribute to the sum total of diagnostic inefficiency. In some instances there is a lack of education and experience; in others it may be the result of pure laziness; but in the great majority of cases it is more properly attributed to the urgent demands placed upon the busy practitioner. He too often yields, perhaps unwittingly, to the flattering appeals of numerous patrons and the natural desire to crowd as much work as possible into a given period of time, and thus, under the stress and strain of a so-called successful career, he leaves off, one by one, the diagnostic refinements, and in so doing, he helps to bring upon his pro-

fession the charge of inefficiency and the widespread feeling that the physicians need to be educated in the diagnosis of tuberculosis.

Thus far I have spent valuable time in an attempt to identify each of you with the subject under discussion. Regardless of your professional attainments, if you are in the practice of medicine you must acknowledge this as your problem and accept the grave responsibility which this acknowledgement implies.

For more than two thousand years the medical profession was unable to favorably influence the course of consumption which was almost invariably fatal. Hipocrates pronounced this the most dangerous disease and the one that proved fatal to the greatest number of people; until a few decades ago no one dared depart from this teaching. In 1840 Charles Dickens wrote: "There is a dread disease which prepares its victims, as it were, for Death; which so refines it of its grosser aspect, and throws around familiar looks, unearthly indications of the coming change; a dread disease in which the struggle between soul and body is so gradual, quiet and solemn and the results so sure that day by day and grain by grain the mortal part wastes and withers away; a disease which medicine never cured, wealth warded off or poverty could boast exemption from; which sometimes moves in giant strides and sometimes at a tardy sluggish pace, *but slow or quick is ever sure and certain.*" Since we tend to become inured to the ills we cannot escape it was natural for physicians to be more or less indifferent with reference to early diagnosis. This excuse has ceased to exist. Tuberculosis is no longer the "Captain of the Men of Death." The prognosis is immeasurably better than it was fifty years ago; in fact it is so charged with hope that it has become the chief diagnostic stimulus. The death rate in the United States, which in 1900 was 202 per 100,000 is now 88 per 100,000. This reduction means a saving of 1,500,000 lives in this significant quarter of a century.

An early diagnosis is desirable in order to give the patient the best possible chance for recovery and to avoid the danger of indiscretions which are certain to accompany the feeding of false security resulting from an incorrect negative diagnosis; also to prevent long continued interruption of business or domestic routine and the consequent financial strain. Early diagnosis and proper management may prevent the danger of contact if tubercle bacilli have not yet appeared in the sputum or it will shorten the duration of unguarded contact in cases with positive sputum. This is very important especially if there are little children among the contacts. Furthermore the sum total of suffering and mental anguish is greatly reduced by early diagnosis.

After allowing for a certain number of tuberculous individuals in whom an early diagnosis is impossible because they purposely avoid the physician until alarmed by the symptoms of advancing disease and the small number of cases with sudden onset and very rapid development, it is passing strange how few early cases of pulmonary tuberculosis are discovered. Perhaps the most embarrassing indictment against the medical profession is the long period of time which often stretches between the date when symptoms first prompt the tuberculous patient to seek medical advice and the time when the disease is correctly diagnosed and proper treatment instituted. Often from three to five physicians have been consulted before a diagnosis of tuberculosis is arrived at. In many of these cases physicians must account for sins of commission as well as omission. The disease may not only progress from bad to worse because of the delayed recognition but the downward progress may be augmented by ill advised therapy such as removal of tonsils because of the systemic symptoms of toxemia; the dietetic treatment of gastric ulcer or so-called spastic colitis in cases where the digestive symptoms predominate. Many other examples might be given if time would permit. In the past too much stress has been placed upon the physical signs and too little attention given to symptoms. Both are important and a study of both must be employed, but, fortunately, no particular skill is required to enable one to acquire a working knowledge of the symptoms of tuberculosis. Symptoms, properly studied in a given case, may at least cause one to

suspect tuberculosis, and a well founded suspicion of tuberculosis, whether ultimately confirmed or not, may save both the patient and the physician. In all probability if tuberculosis is suspected, the patient will be kept under close observation with repeated physical examinations. His environment and habits will be corrected, and if the diagnosis is never proven it may be because the safeguards thrown about the patient prevented further progress of the disease. If, on the other hand, the presence of the disease is ultimately established, the physician has saved himself the chagrin of having completely overlooked a serious condition.

Pulmonary tuberculosis is distinctly a disease of symptoms, and in many cases physical signs are not demonstrable, but a tentative diagnosis, in such cases, may be justly made from symptoms alone. On the contrary, there are cases with physical signs and yet without symptoms. Such cases are not toxic and not particularly in need of recognition so far as treatment is concerned. It is well to remember that tuberculosis is usually characterized by recurrent periods of activity (with symptoms) and that progressive untreated tuberculosis runs an average course of from three to five years with daily symptoms before death occurs. With these facts in mind it is quite evident that history taking should prove to be a significant factor in determining the diagnosis. In every community there are many cases of tuberculosis undiagnosed and untreated, or treated for other conditions because the simple and illuminating method of studying and properly interpreting symptoms has not been applied to these cases. In beginning the study of a case it is well to remember that tuberculosis is always a possibility regardless of social or physical conditions. We must remember that the robust and rosy cheeked individual may have tuberculosis, and that our friends and even the members of our own family may be gathered in its ranks.

With this comprehensive view of the situation let us see what a carefully taken history may discover. First of all we should ascertain whether or not there is a history of known contact with tuberculosis in the home or otherwise, always bearing in mind the fact that infection and manifest disease are not synonymous. The history of childhood should be thoroughly investigated to determine the question of contact and the child's physical condition. Many children who are below par physically and perhaps classed as cases of malnutrition, are suffering from active tuberculosis, and if they do not succumb to the disease during childhood, they may furnish recruits for the great army of adult cases. We should also ascertain whether or not convalescence after the acute infectious diseases was normal, especially after measles and whooping-cough, and whether the attendance at school was interrupted by any debilitating illness covering a long period of time. In cases developing definite pulmonary tuberculosis in adult life it is not uncommon to find a history of nervous breakdown, anemia, or malaria during the school age necessitating a long period of absence from school. When these cases are closely analyzed by a thorough study of symptoms it is astonishing how often one may find convincing evidence that the condition was not malaria, anemia, or so-called neurasthenia, but tuberculosis.

For diagnostic purposes the symptoms of tuberculosis may be considered under three heads: first, those due to toxines produced by the tubercle bacillus; second, those due to reflex action; and, third, those due to tissue involvement.

Symptoms due to Toxemia:

1. Fatigue.
2. Nervous instability.
3. Indigestion.
4. Loss of weight.
5. Increased pulse rate.
6. Night sweats.
7. Fever.
8. Anemia.

Symptoms due to reflex action:

1. Hoarseness.
2. Tickling of the larynx.
3. Cough.
4. Indigestion.
5. Loss of weight.
6. Chest pains.
7. Increased pulse rate.
8. Flushing of face.

Symptoms due to tissue involvement:

1. Frequent colds.
2. Spitting of blood.

3. Pleurisy.
4. Sputum. 5. Fever.

In the adult the state of being "run down" should always arouse suspicion, especially if there is a history of rapid recuperation when the individual goes on a vacation or gets away from work. A study of this condition often reveals a history of varying degrees of toxemia as indicated by a slight rise of temperature and pulse and unusual fatigue, often digestive disturbances with loss of strength and flesh. Such individuals are sometimes treated for malaria and often advised to get away for a time because of over-work. A vacation will often restore the balance in these cases and they may feel good until another break occurs. Nervous instability or digestive disturbances may overshadow all other symptoms in certain cases of pulmonary tuberculosis and may thus lead to errors in diagnosis. A history of frequent attacks of grip or undue susceptibility to colds should cause one to think of tuberculosis. Likewise the history of cough, hemoptysis, spitting of blood, repeated or protracted hoarseness, huskiness or weakness of the voice, sputum which may be only slight in the mornings, tickling in the throat and pains in the chest. It is unnecessary to dwell upon the significance of these symptoms. They are almost diagnostic, especially when one or more of them can be associated with the signs of toxemia. Every physician knows that hemoptysis should be considered of tuberculous origin until proven otherwise, and that a history of pleurisy with effusion usually means tuberculosis; but not every physician takes the time and pains to develop the past history, and consequently, valuable data is often overlooked.

If there is anything in the history of the present illness to cause a suspicion of tuberculosis, especially if the past history is suggestive, there should be a thorough physical examination and if this with the history fails to establish a diagnosis, the case should be kept under observation with a record of temperature and pulse. Before deciding that a patient is not having fever the temperature should be taken every three hours over a period of two weeks. Loss of weight is also of importance, and it is well to record the normal and maximum weight and to establish the present weight by the use of scales.

Tuberculin, the *x*-ray and other laboratory aids may be employed with advantage if intelligently and cautiously interpreted in the light of symptoms.

Without attempting a discussion of differential diagnosis, I should like to call attention to the fact that many non-tuberculous conditions may give rise to the symptoms of toxemia, as infection in the tonsilar crypts, gastric and intestinal stasis, chronic colitis, infection of the gall bladder, prostatic abscess, abscessed teeth, toxic thyroid and many other disease conditions which should be considered in the diagnosis.

This discussion dealing with principles which are elemental and in some instances axiomatic, is offered with the hope that it may arouse thought and discussion and lead to a more universal and practical application of the knowledge possessed by every physician.

In closing may I urge you to remember that we have ever with us all the necessary means for the application of the fundamental methods of physical examination, which if carefully and faithfully applied, will in the great majority of cases, lead to a definite diagnosis. May I also urge each of you to consider the following questions: Have I realized full the importance of a carefully taken history and the necessity of a thorough physical examination with the patient's clothing removed? Have I learned perfectly the topography of the normal body in order that I may the better recognize departures from the normal? Have I mastered the fundamental methods of physical examination? What degree of efficiency am I getting from inspection, palpation, percussion and auscultation? Have I considered carefully Sir William Jenner's notable statement, "More mistakes are due to want of examination than to want of knowledge"? Have I persistently striven to perfect myself in the application of the diagnostic means at my command? Due consideration of these questions will develop a diagnostic conscience which will not brook the slipshod methods characterizing the past.

Labour

M. W. Hall, M.D., Wichita

Read at Sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3-5, 1927.

For convenience in discussion and description, the subject of labor will be divided into the first, second and third stages. The first stage of labor begins with pain, or uterine contraction and dilating of the birth canal, which causes pain, and always is referred to as pain. Pain is one word we hear a lot about in any labor case. There are just two things uppermost in the patient's mind, pain and the welfare of her baby. In the first stage the patient suffers more real pain than in the remainder of the labor. They feel like less is being accomplished, those "nagging," "dilating" pains as they are rightly termed, certainly wear on her in a short time if something isn't done to give relief. We all know that patients react to pain differently and obviously all cannot be treated by any set rule. A great many mothers have difficulty in nursing their babies, slow involution, nervousness, night sweats, loss of appetite and weight, really because of the nervous strain or shock suffered during labor, many more at least than is realized. In combating this, one of the first things to do is to assure the mother that everything is all right and dispel any fear that she might have for the welfare of her child. Then one of the main phases to treat in the first stage of labor is the conservation of nervous energy.

In giving the patient instructions preparatory to using a narcotic I do not promise them absolute immunity from pain. I tell them that labor must be well started before it is time to give them anything and that it will be a little while before we get the desired action. They should have pains every five to six minutes and dilatation definitely started; i. e. to make sure that they are really in labor. If the patient is very nervous she will be given pantopon, grains 1/3; if not, pantopon grains 1/6 followed immediately with scopolein grain 1/150. It all depends upon the reaction from the initial dose as to the time it is to be repeated and the size of the second dose. They are never given a hypodermic if the cervix is near or completely dilated. Ether or oxygen is preferred in the second stage. They should be placed in a dark quiet room, sympathetic friends and relatives excluded, but must be under constant observation. They will sleep between pains and the dilation will be much more rapid and thus very materially shorten the first stage, and in a majority of cases they remember very little of labor. Some cases will require quite a lot of narcotic and others very little. Your results will not be 100 per cent. Success will not be very wonderful if you try to prescribe the treatment by telephone. Each case is an individual one, and when this is recognized the treatment will receive less criticism.

I think it very necessary that these patients in a long first stage be given some form of liquid diet to keep up the resistance and prevent dehydration. Elimination should be taken care of, special attention to the bladder in cases where narcotics are used. It is surprising sometimes how quickly the bladder can become distended. If distended excessively it will prevent the progress of labor.

Frequent examination of heart tones is very important. My vocabulary is lacking in being able to properly stress this point, but just as a reminder, a slow foetal heart is much more dangerous than a rapid one. A heart tone running below a hundred certainly is an indication for immediate action on the part of the obstetrician.

The blood pressure and urinalysis is important at the beginning of labor. It doesn't matter what they have been up to this time, they should be checked again.

Rectal in preference to vaginal examination has become quite the usual method of internal examination used by physicians in the last few years. It is quite as easy to make the diagnosis, and certainly a much more aseptic technic is made possible, reports to the contrary notwithstanding.

The length of the first stage is dependent upon a great many factors. The main ones being the size of the passage and the passenger, presentation and position and the ability of the soft parts to dilate and the effectiveness of the pains. It is not always necessary for a

doctor to be with his patient during the entire first stage but in case he is not, there should be a nurse present sufficiently informed to make the necessary observations and report. The question is often asked just how long the first stage should be. I think the proper way to answer that is, "It all depends." Indefinite? Yes. So is the first stage. But, I do think that you should try to estimate the probable length of labor in the individual case, based on your physical findings, effectiveness of the pains; but don't turn prophet and tell the patient when you expect the baby unless you are quite sure, or you may have something to explain, and don't tell her that it will soon be over with when you know better.

You must be the judge as to the time to interfere in the progress of labor. If the condition of the mother and baby is good the position and presentation normal and no great disproportion between the passage and the passenger you certainly would let that case go much longer than you would any other. Please do not misunderstand me. An obstetrician will never allaw a patient to labor until she is exhausted or the foetal heart tones show signs of distress. These things will be anticipated. If the membranes have ruptured preceding labor I believe quinine should be given to bring on active labor. In a case where the membranes have ruptured prematurely with the hard os, thick cervix; or in any other presentation other than a cephalic it is very good treatment to use a hydrostatic bag or pack the cervix with gauze to assist in the dilation and to protect the baby. Dilating a hard rigid cervix without the assistance of the bag of waters is pretty rough treatment on the baby and mother too.

Treatment in the second stage is somewhat different, naturally. Here the doctor should be in constant attendance, for complications may arise that would demand quick action, a prolapsed cord, foetal heart tones going bad, premature separation of the placenta, etc.; things that do not often happen, but must be looked for. Heart tones should be taken much more frequently. I do not mean every thirty minutes, I mean every ten or fifteen minutes.

It has always been my belief that a patient should not bear down or work with her pains until the second stage. Her efforts will avail her but little until this time and if she has been pulling and straining during the first stage she is very liable to be too exhausted to put forth much effort with any degree of efficiency when it is most needed.

We all have heard much of dry labor. I will apply the term here to those cases where there is no, or very little liquor amnii in the uterine cavity. The labors are slow for the obvious reason that in place of the uterine muscle pushing the baby through the cervix it grips the baby's body. These are the cases where you are most liable to find Bandl's contraction ring. A number of treatments have been suggested. One is of filling the uterus with normal salt solution. I mention that treatment only to condemn it, because it is very impractical. A simpler method is packing the cervix or inserting a hydrostatic bag and give the patient a hypodermic of pantopon and scopolein, and giving her a little time seems to be the better method.

The subject of dry labor is very great, running occipito posterior a close second and when you get both complications in the same case you certainly have something to occupy your time. It takes time, and the case will do better with the aid of some narcotic. Over 90 per cent of the occiput posteriors will rotate unassisted and a great part of the remainder will rotate eventually with very little assistance. Posture is a great aid to rotation. Have the mother lie on the opposite side of the occiput, i. e. occiput left, the mother will be on her right side. The reason for this posture favoring rotation is that it allows the breech to move over to the opposite side assisting the head in flexion. In many occiput posterior positions the head is extended, really a vertix presenting. You will agree that there are different degrees of occiput posterior, i. e. it might be right or left but there are cases where the occiput is directly posterior, and the baby is flat on its back. Foetal heart tones will be heard very plain in the midline of lower abdomen. You are hearing them through the baby's anterior chest wall. Foetal parts will be easily palpated over the abdomen. I mention a few of

these diagnostic points for it is very necessary that this condition be recognized early for the reason that the case will probably need some operative procedure. Manual rotation without rotating the shoulders is useless. Often the smaller babies will deliver posterior, but I have yet to be convinced that these cases will rotate spontaneously. Forceps or version will be the most probable outcome and most often version will be the method of choice in this type of posterior.

In occiput posterior where instrumental delivery is necessary I prefer the Kielland forceps. It simplifies occiput posterior and deep transverse arrest. The two really difficult positions to make the proper application. The broad blades, long cephalic curve and very slight pelvic curve and a sliding lock make the application much more simple when once the mechanism of the Kielland forceps is understood. They are different from other forceps, more dangerous, perhaps. All forceps are dangerous. Any forceps operation other than a low application is a major operation, yet every day you see physicians using them that wouldn't think of attempting an appendectomy and an appendectomy is a minor operation in comparison. When that is once recognized the morbidity and mortality of forceps operations will be greatly reduced.

In protecting the perineum it requires time and not much bearing down effort on the part of the patient and a gradual dilation and relaxation of muscles aided very materially by an anaesthetic. It will certainly work a great hardship on the baby to allow the head to remain on the perineum too long. A perineum over distended is better lacerated. You perhaps do not agree, but a perineum lacerated can be repaired. Better still is episiotomy, median, lateral or mediolateral episiotomy, just which one can best be repaired by you. The repairing of the episiotomy or laceration is the main thing. By repair I don't mean that you should insert two or three silk-worm sutures and call it surgery. Coaptate the anatomical parts as you would an abdominal incision and do it aseptically like you intended it to heal and if it does you certainly have earned at least a part of your fee.

When the baby is born, hold the head down and strip the mucus from the throat and mouth in preference to wiping the mouth with gauze. It is less dangerous and more efficient. Clamp the cord and tie where clamped and paint cord stump with seven per cent iodine or five per cent mercurochrome. The eyes are treated with a two per cent mercurochrome on two successive days. I have used this technique in over 800 cases, at the Salvation Army Rescue Home, with no eye infections and where we have over twenty-five per cent G. C. infections in the mothers. That is more than can be said of the silver solution.

In the third stage the great danger is hemorrhage. Most mothers under the most favorable conditions will lose more blood than they can afford. The uterus should be under constant observation until placenta is delivered and very close observation until sometime afterwards. That is the one complaint of physicians making deliveries in the home; leaving the patient too soon after the delivery of the placenta. Hemorrhage is one of the main predisposing causes in puerperal sepsis, involution and inability of the mother to nurse her baby. For hemorrhage to occur the placenta must be partially or completely detached. In adhered placenta they do not have hemorrhage. In multipara giving a history of hemorrhage, twin pregnancies, pregnancies in close succession, ineffectual contractions and uterine atony, i. e. those things that predispose to hemorrhage I am using quinine bisulphite, ten to fifteen grains at the beginning of the second stage, and I find it very efficient. I know of no contra-indications for its use in these cases.

I make it a rule to give one c. c. of pituitrin just after the delivery of the baby and I do not massage or manipulate the uterus to induce contraction if there is no hemorrhage. Let it alone, another place to use a little time. Pituitrin very materially shortens the third stage and insures good contractions and a minimum loss of blood. I have experienced no trouble with incarcerated placenta except in two cases of long hard labors with

Bandl's contraction ring; being the only cases where pituitrin might be contra-indicated.

It is very important to examine the secundinae to see that it is all intact, if not all delivered, get it. Getting it is much less dangerous to the mother than letting it remain to slough out.

Two Common Cases of Spinal Cord Disease

Frank L. Flack, M.D., Coffeyville

Read before the Montgomery County Medical Society, September 30, 1927.

The two cases that I desire briefly to report and give the findings on are rather typical and not uncommon examples of lesions, degenerative in character, affecting the spinal cord. These cases have been seen by several members of our society and are rather advanced cases and illustrate in a striking manner the symptoms produced by disturbances in the white and gray matter of the segmental portions of the central nervous system. By segmental portions I mean the spinal cord. The first case is that of a lesion affecting both the white and gray matter of the spinal cord.

The patient, C. L., is a negro age 38 years, at the time of the examination September 9, 1925. His home is in Coffeyville, Kansas. He says that he has never suffered from any sickness confining him to bed and that he has had no disease that he remembers except a mild attack of influenza in 1918. He states that he has had no joint pains or pains in his muscles or anything that is of a rheumatoid nature. He has never had any broken bones or any injury to his head or spine. He has had no operations or other traumata.

His knowledge of his family history is very meager and of no value in this case.

In the past he has been a heavy drinker but in the last few years his potatory habits have been excellent.

PRESENT COMPLAINTS

This man asserts that until July, 1924, he was a good man physically and able to do hard manual labor every day. About this time he states he was using a slash bar to break cinders. He was hitting the cinders in the grate and missed them and hit the grate. This he states jammed the bar into his right hand and injured him. This injury did not break the skin and was followed by no scar or discoloration. At some time following this, he says, he began to notice a stiffness in his right hand and some clumsiness and these complaints were accompanied by no pain. In a course of six months his right hand and forearm began to waste and with this atrophy of the muscles there also came definite contractures producing a fixed position of the arm at the elbow, holding the fingers in flexion and forcibly turning the forearm in toward the body. He states that, "My arm and hand began to go down and my fingers got crooked." Several months following this he states that his leg began to get weak and stiff and he had a lot of trouble in walking and this difficulty has continued to increase until at the present time he can walk only by having some one help him. His legs began to bother him in December, 1924. His left arm was last affected, starting a few months ago. He now says that he has lost all power and use of his arms, forearms, and hands; that they have almost completely shrivelled away and that his legs are almost useless and are getting worse. Of course as the flexors are stronger than the extensors the position of the deformity is usually in flexion. Six months ago, he says, he could walk very well. He makes the very accurate and descriptive statement that he has noticed many times, "My arms and chest feel like the flesh is jumping up and down on the bones." On questioning he states that this shaking and jumping of the muscles of his arms and chest has been present continuously, but the last few months there has been none in his hands and forearms. This means the anterior horn cells for these parts are dead. This jerking of the muscles has not been so noticeable in the lower extremities.

After careful questioning I am sure that he has had no sensory disturbances, which is, of course, very significant and rules out a lesion affecting the columns of Goll and Burdach or of the spinal thalmic tract.

He states that he has had no trouble with the control of his sphincters and is free from pain and sleeps well. He states with emphasis that he has had no diminution in potentia sexualis or libido. He

states that he has had no trouble in talking, swallowing, or breathing, or in the movements of his head. His complaints are limited to the described jumping muscles and his locomotor system. He realizes that he is rapidly becoming helpless.

The patient is a negro appearing to be about the age stated, 38 years. He sits and lies comfortably on the examining table with no complaint of pain or discomfort. He walks with great difficulty and with short, stiff, rigid and spastic steps. Both feet are in inversion. His gait is marked by clonus and dragging foot steps. His arms hang stiffly and uselessly by his side, and when passively turned out, promptly go back to their original position. The color of the mucous membranes appears to be normal and the blood supply in them seems to be adequate. His skin is clear and dry and there are no visible scars. His speech is clear and distinct and shows no disturbances of articulation, nor is there any effort used in talking. He has no dysarthria, dysphagia, or dysmasesia. His posture is stiff, rigid and contracted. His facial expression shows no evidence that he is suffering from pain. He is conscious and well orientated as to time, place and person.

His face below the eyes is slightly pulled to the left and the left facial muscles are more rigid than the right. Distinct tremors and fibrillations of the muscles in the arms, chest, pectoral group and shoulder girdle groups, are evident. There is no hypertrichosis. There is no slurring or scanning of speech.

The lid-slits are wider than normal. The intra-ocular tension is slightly increased and there is a slight exophthalmus. The right pupil is round and regular and reacts promptly to light both direct and consensually and to acommodation, but it does not contract down as much as normal. The left pupil shows some anisocoria but reacts well. There is no edema around the eyes. There is no nystagmus. He has a marked arcus-senilis in each eye.

The fundi are clearly seen in both eyes. The papillae are vertically oval and the temporal sides of the discs are distinctly brighter than the nasal. There is no temporal pallor. The discs seem somewhat paler than normal and the pigment rings are not distinct.

The extraocular movements are well performed. All the cranial nerves seem to function normally, with the exception of the seventh and twelfth. His face is drawn to the left and his tongue shows some deviation to the left.

He has a number of bad and infected teeth and a marked pyorrhea. The gums have retracted from the teeth. His tonsils are enlarged and show a purulent collection in the crypts. The uvula is unusually long. The tongue protrudes readily, deviates to the left and shows a marked tremor in its substance.

The entire thyroid gland is enlarged. Otherwise he shows no adenopathy.

His spine is straight and he complains of no pain or tenderness on being percussed heavily the entire distance of the spine. The range of movement is good, he moves his back freely and without pain forward and backward and from side to side. Most of his back muscles are well preserved as to strength.

Percussion shows the heart to be normal in size, shape and position. There is no abnormal parasternal dullness. The apex beat is localized and both seen and felt in the fifth interspace in the nipple line. No murmurs are heard. The first sound at the apex is split. This is the so-called third sound of Thayer. The second aortic sound is sharp and ringing and is markedly louder than the second pulmonic.

The pulses are equal, regular and syncronous. The radial vessels are distinctly palpable. The pulse rate is 78. His blood pressure is 165 systolic; and 110 diastolic.

His chest is flat and sunken from atrophy. The costal angle is about 135 degrees. His breathing is free and easy and both sides of the chest move normally and without restriction or pain. There is an increased dullness and resistance to percussion over the apex of the right lung both front and back. Other than this the percussion note is clear and normal throughout. The right base does not descend as far on inspiration as the left.

Tactile and vocal fremitus are about normal over the entire chest except

spoken vocal and whispered fremitus are somewhat increased over the right upper chest. Expiration is prolonged over the right upper chest. No rales are heard over the area throughout the rest of the chest. The respiratory murmur is clear and normal.

There are distinct depressions and sunken places above and below the clavicals due to atrophy. Both scapulae project and are winged. The winging meaning atrophied serrati. The trapezii, rhomboideii, seratii and in fact all the muscles that are visible around the shoulder girdle, including the triceps and biceps are seen to fibrillate distinctly. There is no fibrillation in the muscles of the hands or forearms. The anterior horn cells in this part are gone. This twitching in these muscles described can be seen at a distance and is aggravated and set in motion by striking them.

There is complete atrophy of both thenar and hypothenar eminences. The interossei muscles show extreme atrophy, meaning long duration. The depressions between the metacarpal bones in both hands, due to the wasting of the lumbricals and inter-ossei, can be seen. There is almost complete atrophy of the muscles of both arms and forearms and they are entirely devoid of strength. He has no grip, and the fingers are flexed. The shoulder girdle and pectoral muscles are almost completely atrophied. His hands have evidently gone through all the stages of simian and claw hands to a combination of the two and are typical bilateral skeleton hands. All the muscles described above are spastic. The arms and forearms are turned in and the distal joints of the fingers are flexed.

The legs and thighs do not at this time show any atrophy but are weak and spastic and move with difficulty. No trophic changes are evident and there is no pain on passive movement.

The abdomen is full and rounded. The kidneys, liver and spleen are not felt. On deep palpation no muscle spasms or tenderness or rigidity was elicited.

The biceps, triceps and periosteal radial reflexes are present and exaggerated, the triceps on each side giving a clonus. The knee jerks and Achilles jerks are much exaggerated. The corneal and palatal reflexes are present and normal. The periosteal costal reflexes are present and on obtaining them much muscular tremor is produced. He has a definite bilateral Babinski, and also, at times, a Chaddock, Gordon and Oppenheim. He has an exquisite bilateral ankle clonus. His jaw jerk is much exaggerated. No tests could be made for dysmetria, or ataxia, due to his extreme paralysis. Rhomberg could not be tested. His muscle and joint sense is preserved fairly well.

Deep pressure as tested by pinching the muscles of the forearm, calf and thigh, is present and normal. Combined sensation and the asterognostic sense is present and normal. Sensory tests with light objects such as cotton were acute and accurate. He can accurately tell the difference between heat and cold. He can accurately tell the difference between sharp and blunt and locate accurately the distance of two points from each other, the circles being normal. No head zones were found and there was no red reaction to stroking or any white lines following.

The gonads are normal. There are no scars on the phallus. He has a marked phimosis with considerable edema, which is at this time causing him some pain.

R. B. C., 5,200,000; Hb. 90 per cent Sahli. W. B. C. 11,000; Polys. 80 per cent; Small lymph 12 per cent; L. L. 6 per cent; Trans. 2 per cent; Eos. 1 per cent.

There are no abnormal staining qualities or evidence of blood dyscrasia. No poikilocytes or evidence of pernicious anemia. Two different blood Wassermann's were negative both by plain and cholesterinized antigen and the Kahn precipitation test was negative.

Urine analysis. 1020, acid, albumin 1 plus, sugar—, some hyaline and granular casts.

The essential clinical findings in this man are:

1. Progressive and marked atrophy of the upper extremity group and marked fibrillary tremors in the arms, chest and shoulder-girdle muscles.
2. Increased and exaggerated upper extremity reflexes.
3. Spastic paralysis of the legs with pathological and increased deep reflexes.

This includes the ankle clonus and Babinski.

4. Complete absence of sensory changes in any part of the body.

Old right, apical tuberculosis.

In this case we find symptoms of both a lower and upper motor neuron lesion. The bilateral symmetric involvement stamps the disease as affecting the spinal cord. The muscular atrophy and fibrillary twitchings point to an involvement of the anterior motor horn cells. The fibrillary twitchings which are indicative of an irritative lesion of the anterior horn cells may be the first symptom followed by weakness and stiffness. Muscular weakness in this case occurs in muscles not yet affected by atrophy, so that they are not directly related. Atrophy in the lower extremities does not usually advance to the degree present in the arms even in the later stages of the disease.

The muscular spasticity, increased deep reflexes and presence of pathological reflexes, indicate an affection of the lateral pyramidal tracts. In the spinal cord segments supplying the lower extremities involvement of the anterior horn cells has not occurred. Syphilis can be ruled out of this case. Multiple sclerosis is not to be considered because he has only one point of Charcot's triad. He has no temporal pallor. In the cases of multiple sclerosis which I have seen they have all shown a distinct bi-temporal pallor.

This man is beginning to show some bulbar and pontine symptoms. It is reasonable to assume that these bulbar and pontine symptoms will increase and he may have some mid-brain and inter-brain disturbances and these will be accountable for his exitus. The nuclei of the facial and hypoglossal nerves are situated in the pons and medulla and as above noted show some change. There is no evidence or symptoms pointing to a disturbance of the posterior gray cells or of the posterior columns or the spinal thalamic tract. The signs point clearly to a lesion of the upper motor neuron type affecting the pyramids and a degeneration of the anterior horn cells and I have no hesitation in nosologically placing this as a case of amyotrophic lateral sclerosis or Charcot's disease.

This differs from Aran DuChennes disease, progressive muscular atrophy, in that the latter is a disease where the involvement is limited to the anterior horn. Of course it is difficult to distinguish progressive muscular atrophy from Heine Medin's syndrome and the pathology is very similar.

This case is growing rapidly worse and can not live long as he probably will soon have an involvement of some of the suprasegmental structures.

The trouble in this man has started in his hands with weakness and has progressively grown worse and is without a doubt of years duration and has long ante-dated his injury. There is no connection remote or imaginary between his injury and present condition.

De Jerine says that it is due to some toxic degenerative process. Jelliffe and White say it follows acute anterior horn disease and may occur a number of years after such diseases.

One recent writer says that this condition is without question due to some toxic agent carried into the cord by the blood stream.

The so-called, "Living Skeletons," exhibiting themselves in cheap museums and side shows are usually examples of this disease in its most intensified form. Many of them become literally skin and bones.

This man grew continually worse and the last time I saw him had all the bulbar symptoms dysarthria, dysphagia, dysmasesia and died.

It seems that combined cord lesions are more rapidly fatal than a single degeneration.

I desire to digress for a minute to say something about lateral sclerosis or spinal spastic paraplegias. These entities were for some time denied but our later texts recognize them. With Dr. Dickinson in the last few months I saw one of these cases which was typical and fullfilled all the requirements for such a diagnosis.

The second case that I have to report is one showing the subjective and objective symptoms of combined sclerosis of the posterior and lateral columns of the spinal cord. The so-called funicular myelitis. This is a pure affection of the

spinal white matter and evidence of disturbance in the gray matter does not enter into the picture.

The patient, Mrs. A. P., was a married woman 44 years of age, complaining of a weakness, difficulty in walking, a sense of constriction around the waist, paresthesia in the lower extremities and uterine bleeding. Her present illness began about twenty months ago when she noticed numbness in the fingers of both hands. Previous to this her physical condition was good. This numbness and tingling extended up the body to the chest, hands and arms and she had sensations of constriction in these areas which felt like tight rubber bands. About ten months ago she had severe and continued uterine bleeding until she was almost exhausted. She states her doctor at her home in Arkansas gave her some medicine and the uterine bleeding stopped but has now recurred and is her principal complaint. She attributes all her troubles to this. She is now unable to walk. Some time ago she noticed that when she stood with her eyes closed she swayed and was in danger of falling. She states that she is frequently dizzy and that her heart beats very rapidly and pounds. She complains of some tender areas over her legs and here she makes the very acute observation that she is unable to distinguish the nature and contour of objects that she grasps with her hands. She has been practically free from pain, showing of course an absence of radiculitis, a finding in tabes. She has vomited on several occasions. About two months before I saw her she had ridiculously taken a course of chiropractic spinal adjustments which of course were about as efficacious in treatment as an Abrams machine would have been in helping to reach a diagnosis. Recently her legs have been stiffened at the knees. Her friends have noticed her extreme pallor.

Such in brief is her history which recites, numbness, uterine bleeding, lack of stereognosis, girdle sensations, ataxia, inability to walk, unsteadiness, paraplegia and marked pallor. This is a characteristic set of symptoms referable to the posterior and lateral white columns of the spinal cord coming on with pallor. There is no venereal history and the rest of the history is negative so far as it would have any bearing on the nervous disturbances.

Examination shows a middle aged anemic woman lying comfortable in bed and complaining of no pain. The color of the lips and mucous membranes is very pale. She has pyorrhea, some dead teeth and some suspicious looking dentistry.

She has a palpable thyroid isthmus and a loud blowing murmur over the base of her heart, systolic in time, this of course is haemic. Her pulse is 135, respirations 24 and temperature normal.

Pelvic examination shows a small freely movable uterus in normal position. There was a polyp protruding from the cervix which was removed. This accounted for her uterine bleeding.

The rest of the physical examination was essentially negative with the exception of the blood and neurological findings. The blood showed 2,200,000 red cells and a hemoglobin percentage of 50 per cent Sahli. Counting 5,500,000 red cells as normal, and this is in accord with most recent normals, and taking 100 per cent as the normal hemoglobin percentage she should have had 40 per cent hemoglobin. Dividing the amount of hemoglobin she actually has by the amount she should have we get in this case a color index above 1 or 1.25 which means that every red corpuscle has one-fourth more hemoglobin in it than normal. This follows of course Weigert's hypothesis of over supply and is Nature's method of over compensation. This in itself is conclusive evidence that something is seriously out of line. This excess of hemoglobin in the red cells is bound to cause these cells to be larger than normal. These are the familiar megalocytes. There are great numbers of megalocytes in the stained smear and several nucleated reds. The differential count shows Polys 52 per cent, Small L. 36 per cent, Large L. 8 per cent, Eos. 2 per cent, Transition forms 2 per cent. There are several normoblasts and some megaloblasts. The red cells show marked variation in form and size.

In brief the blood examination shows poikilocytosis, reduced polys, a relative lymphocytosis, a decreased red count, nucleated red cells, increased megalocytes and very characteristic, a color index

above one. This of course is sufficient to make a diagnosis of pernicious anemia of the primary type. The finding of nucleated reds rules out the aplastic type.

The positive nerve findings are a weakness and spasticity of the legs. She has very little power in the leg muscles and they are stiff. Both flexors and extensors are weak and stiff. The grip in the hands was poor. There is not so much weakness and spasticity in the upper extremities. All cranial nerves are normal.

There is some disturbance of deep sensation most marked in the lower extremities. The recognition of heat and cold is preserved; showing the spinal thalamic tracts function. She can not tell in which direction the great toe or foot is moved; showing bathy anesthesia or loss of muscle and joint sense. She cannot judge distance. She has marked dysmetria. This bathy anesthesia is usually accompanied by hypertonicity of muscles and in this case well marked. The knee jerks are hyperactive as are also the ankle jerks, there is a bilateral Babinski, Gordon and ankleclonus. There are some tender points along the course of the nerves in the lower extremities. These are not Valliex points found in polyneuritis.

Significant negative findings are absence of Argyll-Robertson pupil, negative Wassermann, no temporal pallor of the optic disc and no atrophy. This will exclude syphilis, multiple sclerosis and lesions of the cerebrum.

The positive neurological findings are, pronounced paresis and ataxia of the lower extremities associated with hypertonic muscles and exaggerated reflexes and clonus. There is marked bathy anesthesia with retension of surface anesthesia and the other findings above enumerated.

We have evidently a disease of the spinal cord, a disturbance of the central nervous system below the brain, or the segmented portion of the central nervous system. The Babinski and other hyperphenomena are diagnostic of a lesion of the upper motor neurons. These of course are situated entirely in the central nervous system and do not enter the peripheral nerves. They start in the motor cells of the precentral gyrus, traverse the centrum semiovale the region of the knee of the internal capsule, then through the basilar part of the pons, enter the foot of the cerebral peduncle and form the pyramids of the medulla where most of the fibers cross to end in the ventral gray. We have sufficient evidence to show an injury of the pyramidal tracts in the spinal cord.

The other findings point to a lesion of the sensory conduction paths.

The absence of lancinating pains rules out a lesion of the posterior roots or nerves in their extra medullary course.

The presence of ataxia and bathy anesthesia point to a lesion in the posterior columns of Goll and Burdach mainly the fasciculus Gracilis or the column of Goll. These columns mediate sensations over muscle and joint sense and all run ipsilateral in the cord decussating in the medulla above the motor decussation and are carried to ventral nucleus of the thalamus and from there of course go through the capsule to the posterior central gyrus. This is the mesial fillet.

The paths for pain, touch and temperature cross immediately on entering the spinal cord and are continued as the spinal thalamic tracts or Gowers columns.

This case shows characteristically a case of primary pernicious anemia with involvement of the posterior and lateral spinal columns.

Sixty to eighty per cent of cases of pernicious anemia show spinal cord changes. Sometimes the first change noted is a disturbance of the posterior columns. The patient does not know when his feet are covered without using his eyes. The changes in the nervous system may remain limited to the posterior column in which case the nervous symptoms resemble closely those of tabes, except the Argyll Robertson pupil. This is probably due to the fact that there is no relay to the brain from the superior colliculus, the light reflex center. They may extend as in this case to the lateral columns, when the signs of an upper motor neuron lesion come into the ascendency. Most cases show only the posterior funiculi changes.

The blood supply to the anterior portion of the cord coming as it does from the anterior spinal artery which is de-

rived from the two vertebrals is more adequate than the blood supply to the posterior part of the cord and may account for the more frequent posterior cord involvements.

It seems reasonable to conclude that the pernicious anemia and combined sclerosis are due to one and the same causes. These nerve changes are of course permanent.

This patient was given a transfusion of 750 c. c. of citrated blood without any reaction and showed some slight improvement. She was taken to her old Arkansas home.

These cases are not so uncommon and illustrate in a remarkable way the functions of the various parts of the spinal cord. This was one of the first and is still the most accurate method of determining the anatomy and function of the various tracts and cells.

Many of these cases have been studied post mortem and the tracts have been definitely followed out. I think this constitutes one of the most common and most frequent forms of degeneration affecting the spinal cord and we have all seen these cases. Of course we all study and elicit the nerve symptoms and findings in all cases showing evidence of any continued anemia.

Ruptured Aneurism of Branch of Cerebral Artery

Fred C. Rewerts, M.D., Bartlesville, Okla.

Read before the Montgomery County Medical Society, September 30, 1927.

Mr. G. E. M., aged 34, a druggist, was first seen on the morning of July 27, with a chief complaint of coma.

Present illness: The present illness began about midnight following the taking of an unknown quantity of home brew and whisky. The patient had attended a picnic earlier in the evening, and after returning home, together with a few friends, had drank the home brew and liquor, when he suddenly complained of a terrific headache. He vomited severely and lapsed into what was supposed to be a drunken sleep, was put to bed and not disturbed until morning. About 7:30 his wife attempted to arouse him, but was unable to do so.

Past history: A complete and accurate past history of the patient was unobtainable, as the parents were not present, and a brother was unable to give an account of his brother's past illnesses during childhood. However, he is supposed to have had some illness of the central nervous system when small, and for the last few years he has had periodic attacks of headache, though not severe enough to keep him from his business. The brother states that at times the patient has had what appeared to be memory lapses of the immediate past, there appearing to be no trouble with distant events. Gain and loss of weight has been within physiological limits, and the general health has apparently been good. As near as can be determined he has never drank to excess, but has probably drank a little every day.

Personal history: Denies venereal disease of any kind. Consistent questioning elicited no luetic infection. Wife is well, and has two healthy children and has had no miscarriages.

Family history: Mother and father alive and well. One brother well, and another brother who some time ago suffered an attack of amnesia for several weeks. He has one sister who is in good health.

PHYSICAL EXAMINATION

The patient is a well nourished male, apparently about 35 years of age, lying in bed on his back. The eyes are closed, breathing stertorous but regular and the jaw relaxed. The hands are lying at the patients' side and legs extended normally. There is no spasticity of the extremities. There are no muscle twitchings. The skin is dry and the temperature apparently normal.

Head: Scalp, hair normal. Ears, external and internal examinations negative. Eyes, no edema of the lids which are closed. The sclera is moderately injected. There is no nystagmus and the cornea appear clear. The pupils are pinhead size, equal and regular, and do not react. After dilatation of pupils the eye grounds appear practically normal; there is no papilledema but the retinal vessels appear engorged and somewhat tortuous. Nose, negative. Mouth, some carious teeth and numerous fillings. Moderate injection of throat and pharynx.

Neck: There are no swellings or abnormal pulsations. The thyroid is not enlarged. There is marked rigidity, board like in character, and with slight pressure the patient raises from the bed protesting incoherently. Rotation appears normal.

Chest: The chest is normal throughout and shows nothing pathological or abnormal. The heart is normal in all respects.

Abdomen: The abdomen also is normal in every way with the exception of reflexes, which will be taken up under the neurological examination.

Genitalia, normal.

Extremities, normal in appearance.

Reflexes: The biceps, triceps and radial are present and normal. Abdominal present and normal. Cremasteric normal. Pre-patellar present on both sides. Patellar exaggerated, with the left greater than the right. Gordon and Oppenheim positive; Achilles present with left brisker than right. Babinski positive. Ankle klonus present. No areas of anaesthesia were found over the body. B. P. was 134/70, temperature 99°, pulse 80, respiration 20.

PROBABLE DIAGNOSIS

1. Traumatic hemorrhage at base of brain.
2. Meningo-enchepalitis.
3. Meningitis.
4. Possible tumor.

Laboratory: W. B. C. 18,000 with 82 per cent polys. R. B. C. 5,000,000. The urinalysis was negative. Lumbar puncture revealed a deep red fluid, under considerable pressure, which macroscopically had the appearance of blood.

Serology: Compliment fixation test of blood and spinal fluid were negative.

Bacteriology: Repeated cultures showed no growth through the course of illness.

TREATMENT

The treatment consisted of sedatives, with attention to elimination and a liquid diet. Hemostatic serum was given at regular intervals, together with small doses of morphine, in an attempt to control the hemorrhage. Hexamine in 15½ gr. doses was given intravenously twice daily. Ice was applied to head and neck. Daily punctures to observe condition of spinal fluid and pressure .

Progress: During the first three days in the hospital the patient's condition apparently remained the same. The temperature ranged from normal to 101. Pulse from 70 to 90; respiration 20. Elimination was normal except that he occasionally required catheterization. He was restless and complained of severe headache all over his head. The reflexes and neck rigidity remained the same. On the 3rd the temperature shot up to 103.6 becoming septic in type. Pulse went up to 100 and the respiration remained at 20. B. P. on the 3rd was 125/80. The mental symptoms, however, improved and the patient was completely conscious and able to talk.

On the morning of the 10th day of his illness, he suffered a relapse, with a return of all the former symptoms in a more marked degree. The coma was complete, the temperature rose gradually to 107.5, pulse 160 and respiration 30. Lumbar puncture again showed the spinal fluid, which had cleared to a light amber color, a deep red color. The patient died on the 13th day of the illness.



AUTOPSY

Autopsy was limited to an examination of the cranial vault.

The skull cap was removed in the usual way. The surface of the meninges appeared normal, there being no exudate present. The brain showed nothing except engorgement of the vessels, the architecture being entirely undisturbed. (Body had been embalmed.) The brain was very carefully removed from the skull for more detailed examination. At the base, immediately adjacent to the

pineal body, was found an area of hemorrhage measuring 1½ cm. in diameter. It was partially covered with a thin membrane and apparently communicated with a mass of small vessels at the base, in this region. The membrane can be stripped from the mass. Surrounding this there is considerable subpial and subarachnoid hemorrhage, extending over the base and up onto the lateral surface. Repeated section shows no other pathological lesions in the substance. The brain weighs 1540 gms.

Histological Pathology: See report. (1).

Etiology: Unknown.

(1) Histological Pathology: Section taken through the clot at the base of the brain adjacent to the pineal body shows a vessel wall markedly thinned out and is lined by a layer of hyalinized fibrin on one side immediately abbutting on this there is a typical thrombus showing the characteristic lines of Zahn and on one side there is considerable fibrin and breaking up of the vessel wall and it continues only about one-half way round the thrombus. In other areas the piarchnoid is considerably swollen and shows an infiltration with monos and a few polys. There is considerable hemorrhage in many areas under the pia. The brain proper shows nothing but some perivascular mononuclear infiltration.

Diagnosis: Ruptured aneurism of a branch of the right posterior cerebral artery with diffuse subpial and subarachnoid hamorrhage.

FERDINAND C. HELWIG, Pathologist.

KANSAS MEICAL LABORATORY ASSCIATION

The Correlation of Field and Laboratory Work in Milk Control

NEVA RITTER
Bacteriologist, Kansas City Consumers' League

The best results in milk control work can be obtained only when the inspection of the dairies, and the testing of the milk and milk products, are carried on interdependently.

A more intelligent and useful dairy inspection can be made when the inspector is armed with the recent bacterial counts of the product from the dairy. Also laboratory tests are always of great assistance to the inspector when he is called upon to aid the dairymen in improving the sanitary quality of the milk, or in helping them to locate the cause of high bacterial counts.

In the milk control work as carried on by the laboratory and inspection forces of the Kansas City Consumers' League, when high bacterial counts occur on the supervised dairies, tests are made through the complete process of milk handling to locate the cause of the high counts. Samples are taken at every step in the transfer of milk from one utensil or part of the equipment to another.

A complete study of a dairy would include tests at the following points:

Directly from the cow's udder. In taking these samples milk is collected directly into the sample bottles when the cow is about half milked. Ordinarily the sample is a composite of one stream from each teat, but when a cow is found to give high count milk, the test may be of milk from each quarter of the udder.

From the pail. This may be used to locate high count cows, to check the sterilization of milk pails, or to check the milking methods of the men in the dairy barn. This sample may be taken with a pipette but is more conveniently caught in the sample bottle as the milk is poured out of the pail. When a milking machine is used the count of the milk directly from the milking machine pail, coupled with tests directly from the cows udder, may give needed information on the care of the milking machine.

Under the strainer. This sample is useful in ascertaining whether the strainer is properly cared for. It is usually collected into the bottle directly.

Above and below the cooler. These samples may be taken either with pipette or directly from milk stream.

Through each of the other vessels which the milk touches on its way to the bottler. The means of collecting these samples vary in different dairies, depending on the way the milk is handled.

Into and out of the bottler. These two samples are often keys to high counts, as the cleaning of the bottle filling mechanism is a point which can be so easily slighted, even by scrupulously clean workers.

To complete the history a sample should be taken from a bottle of milk at the dairy, and from a bottle of milk taken from the delivery truck on the route, in order to observe the condition in which the milk is held before reaching the consumer. Thus the milk is tested from the

"cow to the consumer."

When cream counts are high, the part the separator plays is learned by sampling the milk as it is poured into the separator, and the cream and the skim as they leave it.

Another item to be observed on the dairies is the condition of the bottles at the time of filling. In our organization, the collection of sample bottles is a part of each routine inspection, as well as these special tests. A bottle is carefully removed from the sterilizer and capped by the inspector, who handles the caps in such manner that the under side is not touched by the fingers in placing it on the bottle. Two or three bottles from different locations within the sterilizer are usually used as samples.

When milking pails, cans, or other pieces of equipment are suspected to be sources of contamination they are tested directly by emptying one liter of sterilized water into such vessel, agitating it to wash the interior completely, and withdrawing a portion into a sample bottle to bring to the laboratory. Tests on milking machines are made by immersing the teat cups in a vessel of sterilized water and drawing it into the pail, and then testing this water.

The water supply is sampled both at the source and after a chemical disinfectant has been added, which treatment is required for all water used for the dairy utensils.

Each factor affecting the bacterial count of milk may in this way be investigated, in order to find the means of eliminating high counts. In the several hundred such complete tests made in the League's laboratory, some have been found where the infection of the milk was caused by any one or several of the above items. Two years ago on one dairy, one cow, passed as healthy on a physical examination by a veterinarian, was found to have one quarter of the udder discharging such enormous numbers of streptococci as to infect quite a portion of the dairy's output. Improperly sterilized strainer cloths have been found to raise the count of the milk. Cans not thoroughly cleaned and sterilized are a frequent cause of high counts, as is the bottler as above mentioned. In some cases these sets of samples show excellent handling of the milk on the dairy, but it is delivered with a high count, indicating insufficient care during holding and transportation.

UNIVERSITY OF KANSAS CLINICS

The Treatment of Undescended Testicle

CLINIC OF DR. CLINTON K. SMITH

Instructor in Urology

Undescended testicle interests us from two standpoints, the cause, and the cure.

Of the first little need be said. We need only to keep in mind the fact that there is a congenital shortness of the cord and testicular coverings. It is herein that our interest rests concerning the cause, as our treatment embraces a correction of this defect.

Treatment is always surgical. It is this phase of the subject together with the end results, that I wish to discuss in showing these two cases.

MOST FAVORABLE AGE

The operation should not be done too early in life. The preservation of the blood supply of the testicle—which is all important, presents more technical difficulties in its separation from the other delicate cord structures in early life. Also, the testicle seems less prone to atrophy at a later age. The most favorable time for operation is between the ages of eight and twelve. If postponed beyond this period, the child begins to be peculiarly cognizant of his defect, which should be corrected if for no other than psychological reason.

CLASSIFICATION

Undescended testicle can be classified into three groups according to its position. The first, in which the testicle occupies a fixed position in the inguinal canal. The second, in which the testicle is migratory, occupying intermittently a position in the canal and within the abdominal cavity. The third, those in which the testicle remains within the abdomen. The classification according to the position of the testicle is important from a surgical standpoint, inasmuch as the op-

erative technic differs in several essential details with each group. In the first group the outstanding problem is the separation of the blood supply from the other cord structures. The second group is complicated by hernia and this must be corrected. In the third group, not only must a herniotomy be done, but the floor of the inguinal canal must be opened to the extent of permitting access to the testicle. Usually, the deep epigastric vessels which cross beneath the floor of the canal in its upper part, must be severed to allow the cord to be brought directly into the lower part of the inguinal canal in order to obtain sufficient length to permit the bringing down of the testicle.

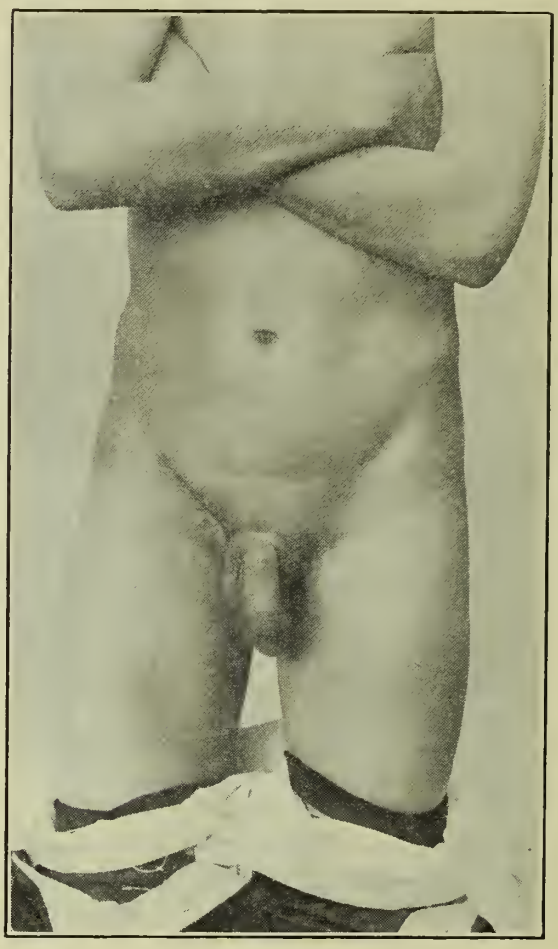
OPERATION

I do not wish to occupy your attention with technical operative detail beyond the extent of pointing out the several fundamental problems which must be solved to arrive at the desired end result.

In the first group the problem is clear cut. The structures over the cord are cut as for herniotomy, the blood supply of the testicle and the vas isolated. All fascia and membranes are carefully dissected free. Almost without exception, the vas and blood supply are of sufficient length to allow the testicle to be brought well down in to the scrotum. There are just two outstanding points in the dissecting of the cord structures. First—in most instances, although there is in reality no hernia, the tunica of the cord is analogous with the hernial sac. This must be carefully dissected free and tied off. This is very often a tedious process as the membrane is usually extremely thin and delicate. Second, the dissection of the cord structures must be carried up and into the internal ring, and care must be exercised to avoid injury to the deep epigastric vessels which cross the canal just below the ring.

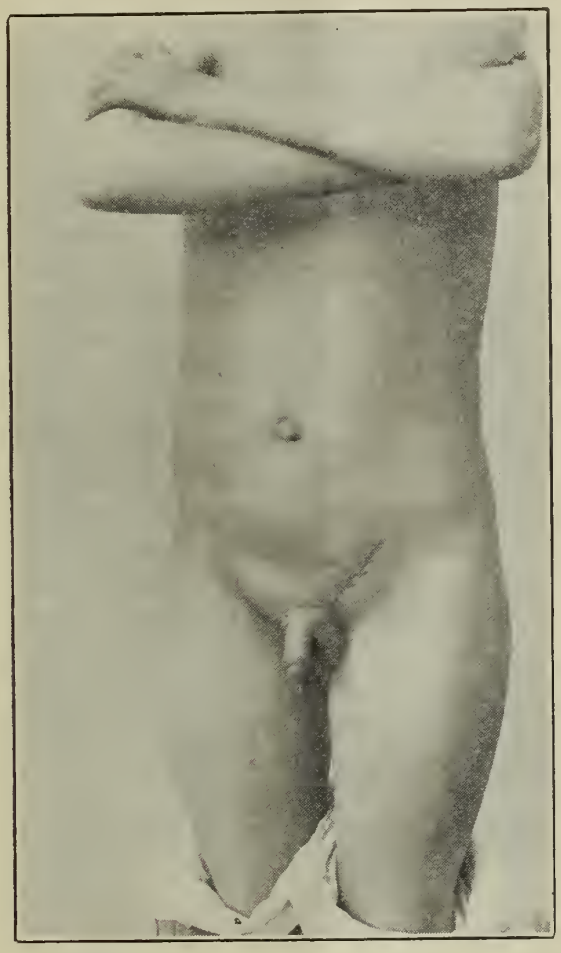
After the dissection freeing the vas and blood supply has been carried out, the structures of the inguinal canal are closed as in herniotomy. The vas and blood supply brought down outside as in transplantation of the cord in hernia, and imbedded in the scrotum. Care must be exercised in closing the wound and anchoring the testicle to avoid undue pressure at any point if we would avoid atrophy of the testicle.

Case No. 1—Age 12 years, is of this group. This operation was done six months ago. Please note the firmness of the testicle, which is of good, normal size, free and movable in the scrotum.



In the second group the problem is essentially the same, with the exception that a definite inguinal hernia of the indirect type is present and must be repaired in addition to the dissection of the cord structures. It has been advocated that the blood supply of the vas is sufficient to maintain the viability of the testicle, and that the tedious dissection of the main blood supply is not essential. This I doubt, but have not had occasion to put it to a test, as I have been able to preserve the main blood supply in my cases, and I am of the opinion

that the chances are superior for normal testicular development.



Case No. 2—Age 13 years, is of the second group. In this case both testicles are involved and both could be placed within the abdomen through the internal ring. Note the good size and position in the scrotum of the testicle on the left six months after operation. Also— there is no evidence of hernia. Note also the position of the testicle in the inguinal canal on the right. We will perform the same operation on this side and I see no reason to expect anything but an equally good result. On these cases of bilateral involvement, operation on the second side should not be done till six months after the first. One might hesitate to subject the remaining testicle to the hazard of operation had the other failed for any reason to show a normal development.

Ampule Medication

Sterile solutions in ampules for subcutaneous, intramuscular or intravenous use are rapidly assuming one of the foremost places among pharmaceutical products. They are being utilized to a greater extent and by an increasing number of physicians as the list of drugs being made available in this form is augmented.

The value of hypodermic and intravenous medication has been realized more and more since the advent of the arsphenamines and a better understanding of the requirements and possibilities of this method of medication.

Numerous drugs admit of no other efficient and safe method of administration, since when given orally they are so adversely affected, even destroyed, by the digestive juices as to render them therapeutically inactive. Among such drugs are epinephrin, insulin and pituitary solution.

Other drugs cannot be satisfactorily given orally because they produce nausea or local gastrointestinal irritation and, owing to the slow or irregular absorption of some substances, the results produced are so variable as to render them of doubtful value or even unsafe.

The advantages of this method of medication are numerous. It admits of more careful and thorough control of the patient due to greater certainty as to dosage, etc. Prompt and efficient action resulting from rapid and complete absorption also obtain this being of especial advantage in emergencies.

A new booklet on the subject of ampule medication has recently appeared from the Abbott Laboratories. In this booklet there are interesting chapters on Isotonicity, Hydrogen ion concentration Buffers, the administration of intravenous injections and a description of solutions in general use. A copy of this booklet may be obtained without cost, on application to the Abbott Laboratories, North Chicago, Ill.

———℞———

"What was that noise I heard in your husband's room last night?"

"Poor John had a dream that he was in his car in town and he was moving his bed around from place to place so that he wouldn't be breaking the law by parking too long in one place."

THE JOURNAL
of the
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CHRISTMAS SPIRIT

The Christmas spirit is not an attribute of childhood. It grows and expands with age. The real Christmas is not a day in the year, nor just a holiday—it is a state of mind.

When you first heard the story of Santa Claus, when you first hung your little stocking to the mantle piece, do you remember with what hope and fear and anxiety you tried to go to sleep and how at the first peep of day you sneaked out to see if you had been overlooked? Do you remember your ecstacies of delight on finding your stocking full to overflowing—not only because of the things you found there, but because of the realization that you had been remembered. You did not then have the Christmas spirit, you did not even know what it meant.

Do you remember years afterward when another little stocking hung on the mantle piece and you saw the hope and fear and anxiety in the countenance of that little replica of your own childhood; and at the first peep of day when you heard his shouts of glee, do you remember how your chest swelled and your throat felt choked and you wanted to make everybody happy? Then you felt the Christmas spirit and you knew what it meant.

Perhaps you remember some years later when another generation of little stockings filled the mantle piece and you saw in the little faces of your grandchildren the same hope and fear and anxiety; and when with the first cock's crow you heard the laughter, the shouts of joy and the clapping of little hands your old heart thumped with love for all the world and you would have showered favors upon your worst enemies if you had any. For the doctor's life is so intimately associated with the ills, the faults and the errors of mankind that with age and experience he grows more tolerant, more sympathetic and more kind.

The Christmas spirit is the concentrated essence of brotherly love, specialized, accumulated and stored up, too frequently for one grand explosion on Christmas day. There is an inexhaustible supply of brotherly love, it wells up in every human heart and if it were permitted to flow freely and unhindered on every day in the year this world would be a happier and a better one.

COMPANIONATE MARRIAGES

There is little, if anything, new in this so-called companionate marriage but the name. Because it has been given a name and because of the extensive publicity recently given to the Haldeman-Julius family on account of the recent marriage of the daughter to Mr. Roselle, this sort of provisional marriage will no doubt become popular.

Mrs. Haldeman-Julius is reported to have given the following explanation of companionate marriage:

"There are really just three points to companionate marriage.

"First, the husband and wife each have the status of a single person in

property matters, altho their sex relationship is legalized and the legal status of any possible child is protected.

"Second, before marriage in a companionable union, each person is thoroughly instructed in birth control.

"Third, that the mutual consent of the couple, legally presented, be the only requisite for the termination of the marriage.

"It is, in short, a marriage the chief object of which is sexual and social companionship."

There are a good many young people that get married and are supported by the parents of one or the other for many years. There are a good many young people that find married life not inconsistent with the business interests of either member of the family where both are gainfully employed. There are a great many young married couples that for economic or social reasons have no children.

Except for the name their marriages differ in no particular from the one so recently solemnized in the glare of newspaper publicity. The vows were as morally and legally binding in the one as in the other. The marriage contract can be annulled in the one case under the same conditions with the same facility as in the others. The provision for facile divorce may be somewhat complicated, after several years of sexual and social companionship, by a lack of mutuality in the consent. There is no doubt, however, that if sexual and social companionship is essential to the lives and happiness of modern young people of the age of these two, it should be legalized by marriage. But why distinguish such marriages by another name?

MEDICINE AT FORT RILEY

It may be a matter of interest to the profession of the State to know that the medical staff at Fort Riley, Lieutenant-Colonel, Medical Corps, J. W. Grissinger in charge, conducts regular monthly medical meetings, much after the plan and along the lines of our county societies, with this difference, however; the talent is usually from among their own personnel, though there are but eight medical men on the staff at the present time.

Their last meeting was on November 25 at 2:30 p. m. The program was in charge of Major Dean F. Winn, M.D., Chief of the Surgical Service. Major Winn discussed these subjects:

1. Fracture of the Clavicle
2. Technic of local aenesthesia for repair of inguinal hernia
3. Some remarks on fracture of the femur.

There were present as guests about a dozen civilian physicians from Clay, Riley and Geary counties. Colonel Grissinger invited them to take part in the discussions which was done with great freedom.

Lieutenant Beasly showed some *x*-ray films of some of his work in gall bladder visualization after the Graham-Cole method, together with comparative results with the intravenous method as against the oral method of administering the dye.

Their next meeting will be December 16. Colonel Grissinger will be in charge.

At their January meeting Colonel Grissinger expects to show a film taken by the Government while the A. E. F. was in France and while the troops were actually in combat. This picture will not be shown as, nor is it calculated to be a spectacular proposition; nor is it featured up as is customary and essential in the usual commercial film. It is a real and actual detail of our troops in action, genuine combat. It is not, never has been, nor will it be shown as a commercial proposition. A number of the members of neighboring county societies have been

invited to be present.

The above bit of news-information may be of general interest to the State society members. Some of our men could and would do well to emulate these men, medical officers at the Fort Riley post. There certainly is no reason why any county in the State should be without at least an occasional medical meeting and no reason save the one of incompetency, which among medical men should not exist, to be without an organization.

C. C. S.

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CHIPS

Ten cases of erysipelas treated with nonspecific protein injections have been reported by Gerdes. Daily intramuscular injections of 10 c. c. of a milk preparation were given. Three or four injections were sufficient to bring about favorable results. The fever and eruption subsided rapidly, convalescence began within three or four days.

Recent reports of some microscopical studies of the brains in cases of postvaccinal encephalitis and in cases of epidemic encephalitis, made by Bouman, state that the brains in cases of postvaccinal encephalitis show a microscopical picture entirely different from that found in epidemic encephalitis.

From a review of the history of general paralysis and of syphilis in various races, Kanner concludes that general paralysis makes its appearance from 200 to 300 years after the infection of a nation with syphilis, that its prevalence gradually increases for about 200 years and then it begins to decline and may ultimately become extinct.

Intravenous injections of hypertonic salt solutions have been used in cholera and other diseases to increase the blood volume. Fleming shows as the result of his studies that they also increase the bactericidal power of the blood. If the salt content of the blood is materially raised by the injection of large amounts the bactericidal power is temporarily lost but after a few hours it is greatly increased. If the salt content in the blood of man is increased by 0.01 per cent there will be after three hours, a marked rise in the bactericidal power of the blood.

In an article that appeared in the August number of Archives of Internal Medicine, Perkin calls attention to the importance of determining the bilirubin content of the blood in patients receiving arsenicals, particularly the arsphenamine group, because it affords the earliest possible indication of damage to the liver. A record of the blood bilirubin value should be made at the commencement of the treatment and repeated at regular intervals during the course. As long as the reading remains normal treatment may be safely continued. A rise of a few milligrams is significant and a considerable rise calls for immediate cessation of the treatment. When an arsenical hepatitis has been established the determination of the bilirubin affords reliable evidence concerning the severity and progress of the lesion.

Clarence C. Rice, in the April 6 number of Medical Journal and Record says: "The removal of tonsils, capsule and all must be a grave anatomical shock to the pharynx and larynx by reason of the sudden lessening of blood and nerve supply and the substitution of scar tissue for a normal moist mucous lining. This is followed by surface dryness all the way from the vault of the pharynx downward, and such catarrhal dryness quickly extends to the larynx and trachea."

The treatment of chronic epidemic encephalitis by induced malaria has proved of no practical value according to the report of a number of cases so treated by McCowan and Cook in the London Lancet, October 22. In their conclusion it was stated that there was no change in mental symptoms or neurological signs. The only result of the treatment was a debilitating effect on the general health of the patients, a debility was very prolonged owing to the poor recuperative powers of the encephalitic. They condemn malarial therapy as a thoroughly useless and unjustifiable method of treatment in these cases.

In the same number of the Lancet a number of cases of Parkinsonian syndrome following encephalitis that were treated with induced malaria were reported by Craig. He says that there was some temporary degree of improvement in all the cases. This was most apparent in the decrease of salivation and sweating, quicker cerebration, and in the facial expression. There was apparently some degree of improvement in the mental condition. There was little or no improvement in the rigidity of the trunk, exaggerated reflexes and tremor.

In concluding a lecture on the tobacco habit, W. E. Dixon said: (London Lancet, October 22) "It may be argued that if nicotine adds to the agreeableness of life, why not use a path so pleasant? In persons of vivid sensations, to calm the commotion of conflicting sensations may be beneficial, even to the higher faculties; in the dull and listless to stimulate thought must be beneficial. It may well be that living in a civilization such as ours, under the strained conditions imposed by residence in cities, the ordinary man shows in his nervous responses variations from the normal, and on such tobacco exerts a beneficial function. To what extent strict moderation in the use of tobacco leads to vascular degeneration is uncertain; is it the rule or the exception? This is the vital question to which we require an answer, and upon this answer something of the well-being of the nation depends."

There is an article in the June number of the Archives of Pathology by Rohdenburg on so-called chronic appendicitis that suggests a new conception of this condition. His article was based on the study of 3,214 appendixes and in his comment on his findings he says: "The condition of so-called chronic appendicitis is in reality a productive inflammation of that organ produced by a lesion of the sympathetic nerve system. This lesion is not restricted to the appendix alone. It is also found in so-called chronic cholecystitis both with and without stones. The lesion, therefore, is probably general to the splanchnic sympathetic nervous system. In the appendix the ganglion cell lesions occur first and are followed by a fibrosis. The nerve lesions would thus explain reflex gastric symptoms, the attacks of spasm in the gastro-intestinal tract and the pain. They would also explain why simple removal of either the appendix or the gall bladder, or of both, is in many instances insufficient to relieve the symptoms."

Dr. J. E. Henshall

Porter Brown, M.D., Salina

To the Editor of the Kansas Medical Journal:

No doubt you know of the death of Dr. E. O. Henshall, father of Dr. J. E. Henshall of Osborne, and one of the pioneers in Medicine in NorthWest Kansas; but I am taking this liberty of voicing some appreciation for such a man and his influence among the people whom he served.

The complete confidence and deep admiration of my parents for Dr. Henshall as he treated our family, are among my first recollections of early Kansas days. Later, his encouragement, interest and sympathy for me as a young chap just leaving school and starting to practice in his territory, I shall never forget. His wise council and his frank criticism, I shall value most highly. To the day of his death, he maintained, "Nothing is impossible for you young fellows." And in his characteristic way, wished us "Great luck."

The words of Sir William Osler could well be applied to Dr. Henshall. "He found exceptional happiness in the profession of his choice. He found fellowship, respect and friendship among the members of the profession and among those whom he served; and in this finding, he found life a success."

The enclosed letter, written by Dr. Henshall several years ago while vacationing in the South, was addressed to his parrot, Bill, and expresses in his own words better than I could in mine, his charitable life and fine character.

October 15, 1919.

Dear Bill, alias George:

You came to us through the gratitude of a former patient. That patient of ours loved you and only considered the sacrifice of a separation when we informed him that his time on earth was limited and that he should not waste any of that limited time before getting back to his home and making thorough preparation for that lone-

some journey from which no traveler has ever returned. He accepted this admonition, bade you good-bye, and turned his face to the West. We knew him well. He was a man of kind heart and by that separation you lost a kind friend and liberal provider. We have been led to believe that many of your undeterminable conversations have been requiems to his memory. It is very fitting and timely of you and indicates to us that you are not forgetful of kindnesses rendered. You gave no flowers and shed no tears because it is not the custom of your kind. They were not expected of you. You did the best you could under the circumstances. Bill, how much better this world would be if we would emulate your example. Yes, Bill, we are aware that flowers cannot be seen by the departed nor their fragrance appreciated, but your contributions to memory are a consolation.

Bill, you have been a member of our family ever since. We have left you many times to visit the various winter resorts of the country. We left you in the best of hands. It could not be considered a desertion. We always returned more glad to be with you. The many years you have been with us there may have been some differences arise, but we recognized the fact that you were right and we were wrong. We sincerely beg your pardon for any errors we may have committed and any heartaches that you may have had by our omissions. We have always endeavored to give you as many privileges as was consistent with the best manners of society and your ancestral habits. We always divided our menu with you. Your wise and assuring look together with the appreciative manifestations and wierd music have been a great source of pleasure to us.

Bill, it is our hope that during all the years you have lived with us that you have heard no unkind words that might be misinterpreted. If you learn by example when we cannot speak well of people we say nothing. We weigh our words carefully and say what we mean. We make it a rule to never condemn people until we have evidence that will stand in court. We like our friends and disregard our enemies, throwing superstition and prejudice to the winds.

Bill, we presume that you appreciate the fact that humanity is imperfect and subject to wrong doing. Therefore, we should be lenient and forgiving. We take it that people as well as fowls do many things for which they are sorry and would not repeat if the same opportunity presented itself. Bill, we have learned from you patience, forbearance, and gratitude, and we hope you have learned from us kindness, punctuality, honesty and charity.

Bill, you have left us. Not of your own free will and accord, but by virtue of ownership. We are told that the best of friends must part but when the separation is not so distant but that frequent meetings may take place, it is more easily borne. We know you are well provided for and this unloads us of future anxieties. We hope that your new surroundings will prove congenial and you will continue that happy condition of mind that will allow you to whistle, sing and chatter as your predecessors have done through past generations.

With kindest recollections and best wishes, we beg to remain

Yours very truly,
Doc.

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The pathetic pill is the therapeutic agent of the criminal.

MEDICAL SCHOOL NOTES

Dr. Thomas G. Orr read a paper before the Orthopedic Section of the Southern Medical Association, November 17, 1927, on "Thrombo-Angiitis Obliterans."

Dr. A. E. Hertzler read a paper at the recent meeting of the Jackson County Medical Society. Dr. Wahl opened the discussion.

Dr. Edward L. Saylor has accepted the position as Pathologist of the Methodist Hospital in St. Joseph, Mo. Dr. Saylor will leave December 1, to take up his new duties.

Dr. W. Byron Black '22, Dr. Homer A. Beal '21, Dr. O. J. Dixon '16 and Dr. Raymond E. Teall '10 have recently been appointed in the Ophthalmology and Otorhinlaryngology Departments of the Dispensary at Bell Memorial Hospital.

Dr. Milton Singleton and Dr. Lawrence P. Engel have been accepted by the American College of Surgeons.

The following doctors attended the K. U. Alumni Clinics held at Bell Memorial Hospital, November 18: Dr. Sherman L. Axford, Lansing, Kan.; Dr. R. C. Henderson, Erie, Kan.; Dr. R. W. Emerson, Topeka, Kan.; Dr. J. G. Lee, Bonner Springs, Kan.; Dr. W. D. Groff, Nortonville, Kan.; Dr. T. W. Adair, Archie, Mo.; Dr. H. E. Marchbanks, Pittsburg, Kan.; Dr. C. H. Suddarth, Excelsior Springs, Mo.; Dr. J. R. Bechtel, Lawrence, Kan.; Dr. P. B. Champlin, Enid, Okla.; Dr. Geo. I. Thacher, Waterville, Kan.; Dr. W. H. Finley, Turner, Kan., and Dr. C. E. Shephard, Larned, Kan. Also, many local doctors attended these clinics.

Dr. Vansel Johnson '25, is Resident Physician at the Lincoln Hospital, New York City, N. Y.

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SOCIETIES

REPUBLIC COUNTY SOCIETY

The Republic County Medical Society held its annual meeting in the Chamber of Commerce rooms on Thursday, November 10.

Dr. Joseph Pestal and Dr. F. C. Hall of Cuba, and Dr. F. E. Way of Talmo

were elected members of the society.

The committee on the children's clinic at the County Fair reported 226 children examined. Dr. Belknap of Topeka was chief examiner.

The following officers were elected for 1928:

C. V. Haggman of Scandia, President; W. I. McFarland, Belleville, Vice President; H. D. Thomas, Belleville, re-elected for sixteenth term, Secretary-Treasurer. Drs. L. O. Nordstrom and R. H. Munford, Belleville, Program Committee.

Dr. L. O. Nordstrom, retiring president, gave a very instructive talk on cancer of the stomach with history of case coming to autopsy without operation. Dr. R. H. Munford demonstrated *x*-ray of the case.

Dr. Croson of Clay Center gave a very helpful paper on appendicitis from the diagnostic and surgical standpoint. Dr. C. C. Stillman of Morganville, our councillor, discussed the papers and offered suggestions for the continued success of the county meetings. This is the second time this year that Dr. Stillman has met with us.

Dr. C. O. Anderson of Concordia was prepared to demonstrate some pictures of a case but due to the lateness of the hour he postponed this to a later meeting.

Following the program Dr. Nordstrom invited the members to his home where his wife had prepared a very excellent lunch which soon disappeared, leaving the members in a very kindly frame of mind for the hospitality of the doctor and his wife.

H. D. Thomas, Secy.

FRANKLIN COUNTY MEDICAL SOCIETY

The regular meeting of the Franklin County Medical Society was held November 30 in the auditorium of the High School building. It was an open meeting to which the public was invited. The subject was Tuberculosis. Dr. F. A. Trump had the program in charge. The meeting was called to order by the president, Dr. G. W. Davis, who introduced Dr. Trump. Dr. Trump in a few minutes told the audience what attitude the physician assumed in combatting disease and how he was continually working to abolish the ills from which he secures his living.

Dr. L. H. Lerrigo of the State Board of Health was introduced and spoke of Health Education. Showing how the bare facts of physiology was supplemented by the teaching of health habits and how the desire of the health authorities was to train the children through the school, to practice the proper sanitary habits and in a practical way demonstrate physiological living.

Dr. Sam Snyder of Kansas City was introduced by Dr. Trump and spoke in an earnest simple way of tuberculosis, it's propagation and spread and the methods to prevent and cure the disease. He spoke of the declining death rate from the disease and said that early diagnosis and proper regime on the part of the afflicted persons would finally banish the great white plague.

Dr. Snyder said that while treatment in a sanitarium was desirable, home treatment was quite consistent with the demands required for successful treatment of tuberculosis. He emphasized rest, absolute, until the fever was gone, fresh air and sunshine, freedom from worry and contentment were the prerequisites. Good food was important but the big things were a rigid adherance to a program of rest and fresh air and a very gradual return to a life of activity.

Dr. Snyder said that children contracted tuberculosis but that it was adults in which the disease had become active that spread the disease and that children should not be allowed to have contact with adults suffering from tuberculosis.

Dr. Davis thanked the audience for its attendance and close attention to the speakers.

J. R. Scott, Secy.

RILEY COUNTY SOCIETY

The regular meeting of the Riley County Society was held in Manhattan, November 15.

Following a dinner at the Gillett Hotel the meeting was called to order by President Dr. H. T. Groody. Minutes of the previous meeting were read and approved.

There was some informal discussion relative to the diphtheria campaign

which had just been completed in Manhattan.

The application for membership of Dr. Barrett Nelson was read and referred to the Board of Censors to be reported upon at the following meeting.

The following members and guests were present: Drs. Bressler, Cassidy, Cave, Colt, Sr., Colt, Jr., Drake, Evans, Groody, McFarlane, Reitzel, Schoonhoven, Siever and Waller.

There was no business to come up before the Society, the program consisted of a paper, entitled "The Postoperative Patient" which was read by Dr. Colt, Jr. The paper was discussed by most of the members present and the discussion closed by Dr. Colt, Jr.

J. D. Colt, Jr., Secy.

SEDGWICK COUNTY MEDICAL SOCIETY

About seventy-five doctors gathered at St. Francis Hospital at 10:00 a. m., November 15, for the all day clinic. The General Surgical Clinic being held in the morning, and the Medical Clinic with demonstration of pathological specimens in the afternoon. These clinics are proving of great interest to the doctors, both at home and of the surrounding towns.

The evening program consisted of the dinner at the Lassen Hotel, at which time the following papers were read:

The Paranasal Sinuses as Etiological Factor in Certain Systemic Diseases, Dr. E. M. Seydell. Keratomalacia, Dr. Paul Carson.

The next clinic will be held December 20, at Wesley Hospital.

W. J. Eilerts, Secy.

STAFFORD COUNTY SOCIETY

No meeting was held in November. The secretary was in the hospital recovering from an operation and the president was away on vacation.

The regular December meeting will be held the second Wednesday when officers will be selcted for the ensuing year. At this meeting two important subjects will be discussed: "Birth Control" and the "Basic Science Act."

During his confinement in the hospital the secretary succumbed to a humorous impulse with the following result:

She did not have gastritis,
No evidence of gout;
The doctors all agreed that her
Appendix must come out.

He did not have arthritis,
His insides all seemed stout,
The doctors finally agreed
His tonsils must come out.

The next, a pale anemic lass,
The picture of despair,
Examined her most careful,
Then ordered, bob her hair.

I did not have an ache nor pain,
Was up, was in and out,
My prostate was indicted
And of course had to come out.

When you go to a hospital,
They'll operate, no doubt,
And in the process some of your
Internals will come out.

Why call it operating?
Why plain old English flout?
Be sensible, be plain and say
"I've had a coming out!"

CLAY COUNTY SOCIETY

The Clay County Society was entertained by Drs. Carr and Smiley at Junction City at dinner, followed by an interesting program on November 9. Drs. Briggs and Ebright of Wichita were the speakers of the evening. The former talked of ectopic pregnancy. The latter discussed acute poliomyelitis, also subdeltoid bursitis. Besides members of the local profession present as guests there were also present Mesdames Ebright and Briggs of Wichita and seven medical officers from Ft. Riley, the entire corps of the medical staff, there being but eight. The dinner was good. The program excellent, the discussion first class, and the company genial, so what more could be desired?

C. C. Stillman.

SHAWNEE COUNTY SOCIETY

The monthly meeting of the Shawnee County Medical Society was held at the Topeka State Hospital, Monday evening, November 7. The following program was given by the staff:

Progressive Muscular Atrophy (2 brothers) (clinical cases)—Dr. Perry.
Multiple Sclerosis (3 clinical cases)—Dr. Perry.
Unusual Case of Dementia Precox (clinical case)—Dr. Doyne.
Alzheimer's Disease (clinical case)—Dr. Chapman.
Paresis in Man and Wife—Dr. DeLand.
Encephalitis—Dr. R. J. Miller, Dr. Lattimore, Dr. Perry.

EARLE G. BROWN, M.D., Secy.

HARVEY COUNTY SOCIETY

The regular monthly meeting of the Harvey County Medical Society was held on November 7. Seventeen members of the Society had dinner together at the Fred Harvey Dining Room at 6:30 p. m. Program was held at Dr. Miller's office at 7:30 p. m.

Present: Dr. Wm. F. Schroeder, presiding; Drs. Martin, Kalbfleisch, Porter, Miller, McClymonds, Knowles, Grove, Campbell, Bartel, N. R. Smith, L. T. Smith, Peckenschneider, Wheeler, Haake and Glover.

The secretary read the minutes of the meeting of October 3 which were approved as corrected. He also read the application of Dr. Arnold G. Isaac of Goessel, Kan., for transfer from the Santa Barbara County, (California) Medical Society to the Harvey County Medical Society. It was moved by Dr. Grove that the rules be suspended and that he be accepted as a member of this society. Motion carried.

A supply of pamphlets supplied by the Bureau of Public Relations of the Kansas Medical Society entitled "A Real Warning" were distributed to members by the secretary.

The following papers were read: "Muscle Changes in Tuberculosis" by Dr. Lloyd E. Peckenschneider. Discussion started by Dr. Knowles. "Tuberculosis in Children" by Dr. Bernard E. Ellis. Discussion started by Dr. Peckenschneider. Meeting adjourned.

H. M. GLOVER, Secy.

DEATHS

Edgar Owen Henshall, Osborne, aged 69, died November 4, 1927, from cancer of the rectum. He graduated from Rush Medical College, Chicago, in 1885. He formerly practiced at Portis. He was a member of the Society.

THE CLIQUE

What is the Clique? 'Tis those who attend
All of the meetings, on whom we depend.
They never are absent unless they are sick—
These are the ones the grouch calls "The Clique."

These are the ones who are never behind with their dues,
Who come to the meetings and have their own views.
They'll serve on committees and never say die;
"The Clique" are the ones that always "get by."

We all should be proud of members like these—
You can call them "The Clique" or whatever you please.
They never attempt any duties to shirk—
These are "The Clique" that do most of the work.

But there are some people who always find fault,
And most of this kind are not worth their salt.
They like to start trouble, they seldom will stick;
They like to put all the work on "The Clique."
—The Amer. Med. Ass'n. Bull., Vol. 18:376 (June 15, 1923.)

DOCTOR JENKS

Doc Jenks has put himself in wrong
He looks as tho he'd met Hell's throng.
Ma Clark has told Bill Jones's wife
That Doc likes just to use the knife.

The news of this has made him frown,
He's sure that folks about the town,
Will know and some perchance may sneer,
For this hits Honor, the thing most dear.

There is no man immune to woe,
And Doc at times may stub his toe;
But why berate him as a skate?
You may yourself just miss the plate.

And please recall a word to mind
Which tells us well just how refined,
Is he who knows "Equanimitas."
And conscience clear as crystal gloss.

One Doc to all, advice we find,
Will help us none unless we mind.
Let's give old Doc a helping hand,
And tell Ma Clark just where to land.

—Essel Noslen.

BOOKS

Clinical Diagnosis by Laboratory Methods. A Working Manual of Clinical Pathology. By James Campbell Todd, Ph.B., M.D., Professor of Clinical Pathology, University of Colorado, and Arthur H. Sanford, M.D., Professor of Clinical Pathology, University of Minnesota (The Mayo Foundation); Head of Section on Clinical Laboratory, Mayo Clinic. Sixth Edition. Revised and Reset. Octavo of 748 pages with 346 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $6.00 net.

This text book has gone through six editions in twenty years, growing in size

and importance with each revision. Former editions were prepared by Dr. Todd but in this one the name of Dr. Sanford appears as co-author. Considerable new material has been added in various sections of the book. Special attention has been given to sources of error in laboratory procedures. Some of the newer methods in blood chemistry are also described.

Ophthalmoscopy, Retinoscopy and Refraction by W. A. Fisher, M.D., Professor of Ophthalmology Chicago Eye, Ear, Nose and Throat College, etc. Second edition revised. Published by F. A. Davis Co., Philadelphia. Price $3.75.

The author, on the theory that ophthalmoscopy was not successfully taught in medical colleges, published the first edition of this book and was so encouraged by its early exhaustion that he has ventured another one. A chapter on the newer methods of refinement in ophthalmic diagnosis has been contributed by Robert Von Der Heydt, M.D. A good many illustrations have also been added and such changes made as were required.

Applied Bio-Chemistry. By Withrow Morse, Ph.D., Professor of Physiological Chemistry and Toxicology, Jefferson Medical College, Philadelphia, Second Edition, Revised and Reset with the co-operation of Joseph M. Looney, M.D., Assistant Professor of Physiological Chemistry, Jefferson Medical Cllege. 988 pages with 272 illustratins. Philadelphia and Lndon: W. B. Saunders Company, 1927. Cloth, $7.00 net.

Although of emoparatively recent importance in the field of medical science great advances have been made in biochemistry and the author has found it necessary to add a great deal of matter in this edition that was not included in the first one. It has been his object to present those biological facts and principles that bear to some extent upon the science and art of medicine.

A Textbook of Physiology: For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., Professor of Physiology in the School of Hygiene and Public Health, Johns Hopkins University, Baltimore. Tenth Edition, thoroughly revised. Octavo of 1081 pages, 308 illustrations. Philadelphia and London: W. B. Saunders Company, 1927. Cloth $6.50.

With the immense amount of experimentation being carried on it hardly seems possible to keep a text book on physiology up to date. By frequent revisions this author has attempted to do so. He has incorporated in this revision all of the established facts and generally accepted knowledge on the subject. There is of course a considerable amount of new material and there has been some marked changes in the old. It is perhaps as nearly a complete text book on the subject as it is possible to produce.

Tobacco and Physical Efficiency by Pierre Schrumpf-Pierron, M.D., Professor of clinical medicine, University of Cairo. Published by Paul B. Hoeber, Inc., New York. Price $1.85.

This is a compilation or rather a digest of the literature on the subject of tobacco and its effects. It is not a report of original investigations. There is a preface by Prof. Henri Vaquez. It is published under the auspices of the Committee to Study the Tobacco Problem of which Dr. Alexander Lambert is chairman. In the foreword written by Dr. Lambert he says: "An unbiased presentation of every variety of opinion as here offered is certain in the end to show best the effects of tobacco on the animal organism."

Lectures on the Biologic Aspects of Colloid and Physiologic Chemistry. A series of lectures given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Iowa, Washington (St. Louis), and the Des Moines Academy of Medicine, Iowa. 1925-26. 12mo of 244 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $2.50 net.

These lectures cover many of the important questions in colloid chemistry that are of interest to physicians as well as biologists and chemists. There is a chapter on the physics of the ultramicroscope and another on the biologic effects of light that are particularly instructive.

Principles of Sanitation for public health workers by C. H. Kibby, Director of Sanitation, Tenn. Coal, Iron and Railroad Company. Published by F. A. Davis Co., Philadelphia. Price $3.50.

This is essentially a compilation of a series of lectures prepared for the instruction of sanitary inspectors. The causes of disease and the means used for prevention are discussed in a non-technical way. It contains a considerable amount of valuable information, in fact, it would be a valuable aid to our educational effort if this book could be sufficiently popularized to get it into the hands of the people generally.

Urography. By William F. Braasch, M.D., Head of Section of Urology, Mayo Clinic; Professor of Urology, Graduate School of Medicine, University of Minnesota. Second Edition, Revised and Enlarged. Octavo of 480 pages, Illustrated with 759 Roentgenograms. Philadelphia and London: W. B. Saunders Company, 1927. Cloth $13.00 net.

This book has been extensively revised and many changes and additions have been made. The author has used the general term "urography" to represent pyelography, ureterography, cystography and urethrography. The technic is carefully described and a large number of illustrations to show the findings by this method of examination.

Infectious Diseases and Aseptic Nursing Technique. A Hand-Book for Nurses. By Dennett L. Richardson, M.D., Superintendent of the Providence City Hospital, Providence, R. I. 12mo of 182 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $1.50 net.

The author has endeavored to present such information concerning infectious diseases as will be useful to nurses. He has not attempted to produce an elaborate text-book, but he has given all the essential facts concerning both acute and chronic infections that are necessary for a nurse to know.

Ophthalmic Optics, an introductory course by Alfred Cowan, M.D., Asst. Professor of Ophthalmology, Graduate School of Medicine University of Pennsylvania. Published by F. A. Davis Co., Philadelphia. Price $3.50.

The purpose of the author is to convey a working knowledge of ophthalmic optics to students and practitioners and he has endeavored to present the subject so that it may be comprehended by those with only an elementary knowledge of mathematics.

Bronchoscopy and Esophagoscopy. By Chavalier Jackson, M.D., Professor of Bronchoscopy and Esophagoscopy, Jefferson Medical College; Professor of Bronchoscopy and Esophagoscopy, Graduate School of Medicine, University of Pennsylvania. Second Edition, Reset. Octavo of 457 pages with 179 illustrations and 10 color plates. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $8.00 net.

This is intended to be a working manual and the author has omitted most of the historical features of the subject. He has also avoided, as far as possible, explanations, elaborations, clinical data and credits, on the theory that they are out of place in this sort of book. He has described the technic as clearly as possible and the excellent illustrations help very considerably in understanding the procedures. The considerable progress which has been made in this field since the first edition was published has been included.

American Medicine and the People's Health by Harry H. Moore, Public Health Economist, U. S. P. H. Published by D. Appleton and Company, New York.

The author has presented an exhaustive analysis of the health problem as it now stands in this country. He has described the present organization of medicine and pointed out the maladjustments in the organization, and he has also carefully invoiced the cost of medical service. He has presented a fairly comprehensive analysis of the practice of medicine from a business standpoint. He has brought out in this book a great many facts that deserve more careful consideration by the medical profession than they are likely to receive.

A Text-Book of Therapeutics, including the Essentials of Pharmacology and Materia Medica. By Arthur A. Stevens, M.D., Professor of Applied Therapeutics in the University of Pennsylvania. Seventh Edition, Entirely Reset. Octavo of 758 pages. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $6.50 net.

In rewriting this book the author has made the names and the composition of the various official preparations conform to the Tenth Revision of the U. S. Pharmacopoeia. A considerable number of new drugs and remedial measures have been described. Concise descriptions of the most important pharmacologic reactions are given as a guide to the practical application of the various therapeutic agents.

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Sometimes Overlooked

Too many physicians, we fear, neglect to specify the manufacturer when prescribing such rather common but exceedingly useful products as, for example, Cod-Liver Oil. Yet differences in quality are just as marked in these preparations as in biologicals or any of the more intricate synthetic chemicals.

Taking Cod-Liver Oil as a case in point, there are of course a number of good brands on the market; but one of them contains not less than 13,500 vitamin "A" units and not less than 2000

vitamin "D" units in each fluidounce. The preparation referred to is Parke, Davis & Co.'s Standardized Cod-Liver Oil. And surely there must be some connection between the high vitamin content of this product and the fact that Parke, Davis & Co. have been carrying on research work in nutritional chemistry for years!

Yes, specification surely pays, all down the line.

Solution of Pituitary for Induction of Labor

The application of solution of pituitary to the nasal mucous membrane as a means of induction of labor has been reported on. Under direct vision with reflected light and the use of a speculum, the nose is cleansed and a pledget of cotton, moistened with 1.25 cc. of solution of pituitary, is inserted snugly under the anterior end of the inferior turbinate of the nostril. At the end of an hour or two the pledget is withdrawn. If necessary, a fresh pledget is applied to the other nostril. The procedure is reported to have been successful in every one of fifty-six cases in which it was used. In a series of twenty-four cases to test the method in normal pregnant women during the last month of pregnancy and at term, there were nine failures. All the babies were born alive. (J. A. M. A., Nov. 12, 1927).

Blueberry Leaf Extract

The Council on Pharmacy and Chemistry publishes a preliminary report on a blueberry leaf extract which has been proposed for use in the treatment of diabetes. A report on this product was read at the last meeting of the American Medical Association by F. M. Allen, who had continued the work begun in Germany by Wagner and others. The product used by Allen was made by E. R. Squibb & Sons; it is not being marketed and will not be offered to physicians in general until its usefulness has been demonstrated. The Council published its preliminary report to call attention to the possible usefulness of the blueberry leaf extract used by Allen. At the same time the Council points out that thus far no standards have been developed which will insure a uniform product; that the actual value of the product in the treatment of diabetes has not yet been proved; and that such proof must come from workers who have the necessary clinical opportunities and laboratory facilities on which to base judgment. (J. A. M. A., Nov. 5, 1927).

Vaccine Treatment for Infections of Upper Respiratory Tract

Upper respiratory infections, acute or chronic, are due to bacterial infection, acute or chronic, are due to bacterial infection, usually of a mixed type. Various organisms, as the pneumococcus, streptococcus, staphylococcus, influenza bacillus and *Micrococcus catarrhalis,* may be demonstrated as normal inhabitants in the nasopharyngeal secretions of healthy persons. During seasonal variations or epidemics, some particular variety or group may predominate, particularly some type of the pneumococcus or the influenza bacillus. Bacteriologic examination in the upper respiratory infections does not reveal one specific organism as several varieties are present, perhaps some one predominating, depending on circumstances. The presence or absence of symptoms interpreted as disease depends mainly on the virulence of the infecting organisms present and the resistance of the individual. It is the latter factor that vaccine therapy is supposed to assist. The results of such treatment must be determined by immunity tests or by clinical results. Advocates of vaccine therapy, either autogenous or stock vaccine, are not able to advance laboratory proof that is convincing, but prefer to depend on the clinical data, which is notoriously uncertain. Colds, coryza, upper respiratory infections and the like may respond so promptly to the usual drug therapy or even to no treatment whatever that it is impossible and unfair to make the clinical results a basis or proof for the justification of vaccine therapy. (J. A. M. A., Nov. 12, 1927).

Introducing New Drugs

The report on blueberry leaf extract which the Council on Pharmacy and Chemistry publishes, illustrates the praiseworthy and increasing tendency on the part of the large pharmaceutic firms to adopt the ideal method of introducing

a new drug, namely, demonstration of the drug's chemical identity and uniformity; report of animal experiments giving promise of therapeutic value; report of clinical trials under the auspices of the discoverer; and provision for confirmatory study of the drug's therapeutic worth by independent investigation. What a contrast to the unscientific and haphazard flooding of the market with new and untried drugs that formerly obtained here and still obtains abroad! The change has arisen from the increasingly critical attitude of the American medical profession. This, it seems reasonable to believe, is due to the faithful and persistent work of the Council of Pharmacy and Chemistry. (J.A.M.A., Nov. 5, 1927).

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Studies in Etiology of Bronchial Asthma

John Eiman, Philadelphia (J.A.M.A., Sept. 17, 1927), asserts that essential bronchial asthma is associated with chronic bronchitis or sinusitis or both. Seventy-seven per cent of the patients tested intradermally gave positive allergic reactions with Berkefeld filtrates of their bronchial or sinus secretions. Twenty-eight out of fifty-six cases were relieved when treated with Berkefeld filtrates of bronchial or sinus secretion eighteen were improved, and ten remained unimproved. About 50 per cent of the patients with essential bronchial asthma have become sensitized to their own bronchial secretion proteins. In order to interpret correctly intradermal reactions with "secretion filtrates," bacterins or soluble bacterial toxins, control tests should be made on normal persons.

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Studies in Treatment of Bronchial Asthma

H. B. Walker, Philadelphia (J.A.M.A., Sept. 17, 1927), stresses the fact that a case of asthma cannot be successfully treated without careful study therefore, hospitalization for from three to four days is ideal. Operations should not be performed in allergic cases unless a complete survey is first made, as many cases are made worse by too hasty operative procedures. It has been proved that many patients develop a seeming sensitiveness to their own respiratory secretions, and when the filtrates derived from these secretions are used subcutaneously, marked relief has been experienced in cases otherwise unrelieved. Caution should be used in the administration of these filtrates, as severe reactions have been experienced, in the form of asthmatic seizures. One should not hesitate to retest if the evidence is sufficient that there is a specific protein sensitivity, as many patients may not show any reaction today to the test and may be markedly sensitive tomorrow.

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Liver Cocktail: Liver in Edible Form For Pernicious Anemia Patient

An edible liver cocktail is prepared by William Thomas Wilkins, Jr, Piqua, Ohio (J.A.M.A., Sept. 17, 1927), as follows: After having scraped the liver it is run through a meat grinder twice, the finest cutter being used, and placed on ice immediately. One-half pound of liver makes four tablespoonfuls of crushed product. Prepare a sauce as follows: Tomato catshup Heinz), ½ cup; lemon juice, ¼ cup; Worcestershire sauce, 2 teaspoonfuls; chives (finely chopped), ½ teaspoonful, and salt and pepper, to taste. Mix the liver and sauce in the proportion of one part crushed liver to two and a half parts of sauce. Chill thoroughly and serve in a cocktail glass with salt crackers or wafers.

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Prevention and Treatment of Postoperative Complications in Abdominal Surgery

An analysis of the factors which are concerned in the causation of operative mortality convinces G. W. Crile and C. C. Higgins, Cleveland (J. A. M. A., Nov. 19, 1927), that, by judicious care, a fatal termination might have been avoided in many instances. The postoperative course in any case is controlled by three factors: (1) the status of the patient (a good or bad risk); (2) the type of operation performed, and (3) the measures employed to prevent complications. The operative factors which must be considered in their relation to postoperative complications are: (a) the type of anesthesia, (b) the extent of the operation, and (c) the organs and tissues involved. Preventive measures against complications are discussed. The prevention of certain specific complications which may

follow abdominal operations, such as ileus, acute gastric dilatation, vomiting, peritonitis and hemorrhage, is outlined.

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Necropsy Reports on Persons Dying Shortly After Extraction of Teeth

The clinical-pathologic reports of three deaths, occurring within a short time after the removal of teeth, are presented by Richard C. Buckley, New Haven, Conn. (J. A. M. A., Nov. 19, 1927), to emphasize again the dangers associated with the extraction of teeth. The first two cases illustrate the serious complications of extraction of many teeth in a patient whose general condition is poor as a result of an existing chronic disease. The association of acute infections and severe clinical symptoms in diabetes is well known. The second case represents a widespread cell degeneration which undoubtedly started following the extraction of a large number of teeth.

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Trigeminal Neuralgia

Limited or subtotal section of that portion of the sensory root which supplies the portion of the gasserian ganglion and its corresponding division, through which the pain is referred, is again urged by Charles H. Frazier, Philadelphia (J. A. M. A., Nov. 19, 1927), as the operation of choice in cases of trigeminal neuralgia. Subtotal section of the sensory root as applied to the second and third division is a matter of recent adoption by Frazier and is not, therefore, recommended without reservations. An experience with nearly 1,000 cases is offered as the basis for these recommendations.

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One Thousand Optic Canals

An investigation of 806 optic canals in living and 194 in dried skulls leads Harry A. Goalwin, New York (J. A. M. A., Nov. 19, 1927), to conclude that there is no appreciable variation depending on sex or racial stock. The average inclination of the axis of the optic canal in the normal adult skull is 39 degrees, and is the same to the horizontal as in the median vertical plane. The average normal optic canal in this series measures 4.1 by 4.65 mm., with virtually no variation depending on age, sex or racial stock. Absolute symmetry of the optic canals may be expected in about 45 per cent of normal skulls; differences of 10 per cent or less may be expected in about 40 per cent of normal skulls; differences of from 10 to 20 per cent occur in about 14 per cent of normal skulls. An optic canal that measures less than 2.8 mm. in one of its diameters cannot contain a normal optic nerve. A classification of the normal shapes of the optic canal is not of clinical value, because pathologic canals present changes in the size or structure of their walls, or both. An enlarged, circular optic canal is indicative of optic nerve tumor. Certain constricted triangular canals are characteristic of certain skull deformities. Irregularity, erosion or destruction of any wall or part of a wall is always pathologic. Hyperostosis and exostoses are always pathologic.

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Nonrotation of Stomach Simulating Spontaneous Hydropneumothorax

Louis I. Harris and Barnet P. Stivelman, New York (J. A. M. A., Nov. 26, 1927), call attention to the fact that nonrotation of the stomach, particularly when combined with an eventration of the right diaphragm, strongly simulates and may be easily confounded with a spontaneous hydropneumothorax or pyopneumothorax localized at the base of the right lung. In their case, the differential diagnosis was made possible by means of a barium meal and subsequent roentgenograms.

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RELAXATIVES

Teacher—"Now, Robert, what is a niche in a church?"

Bobby—"Why, it's just the same as an itch anywhere else, only you can't scratch it as well."